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Approach of Fall Season Necessitates a Better Adjustment of Operations to Requirements

By ANDREW M. ROWLEY

WITH just three weeks remaining of the summer season, the necessity of adjusting operations to meet fall and winter requirements becomes apparent. Gasoline stocks at refineries are considerably above what they were at this time last year despite the decline in consumption although crude oil production, since early last spring, has been far below the output last year. The graph on this page shows very clearly at a glance how crude oil producers have cooperated to keep production in line with requirements, in fact, below requirements as crude oil stocks were reduced more than 33,000,000 barrels from July 1, 1931, to July 1, 1932. With this enormous drop in crude oil production from last March, as compared to last year, the blame for greater stocks of gasoline certainly rests squarely on the shoulders of refiners who have not curtailed runs to stills.

The gasoline market early this week was showing signs of weakness. Such a condition is logical in view of the failure of refiners to better regulate their operations to requirements. Such failure is the more inexcusable because fairly accurate estimates of consumption were available to the industry and given wide publicity since last November. Crude oil producers held their output below the figure set for them but the greater benefits they should have received as a result of these efforts have not been forthcoming because of the weakening influence on the general price structure of excessive stocks of gasoline.

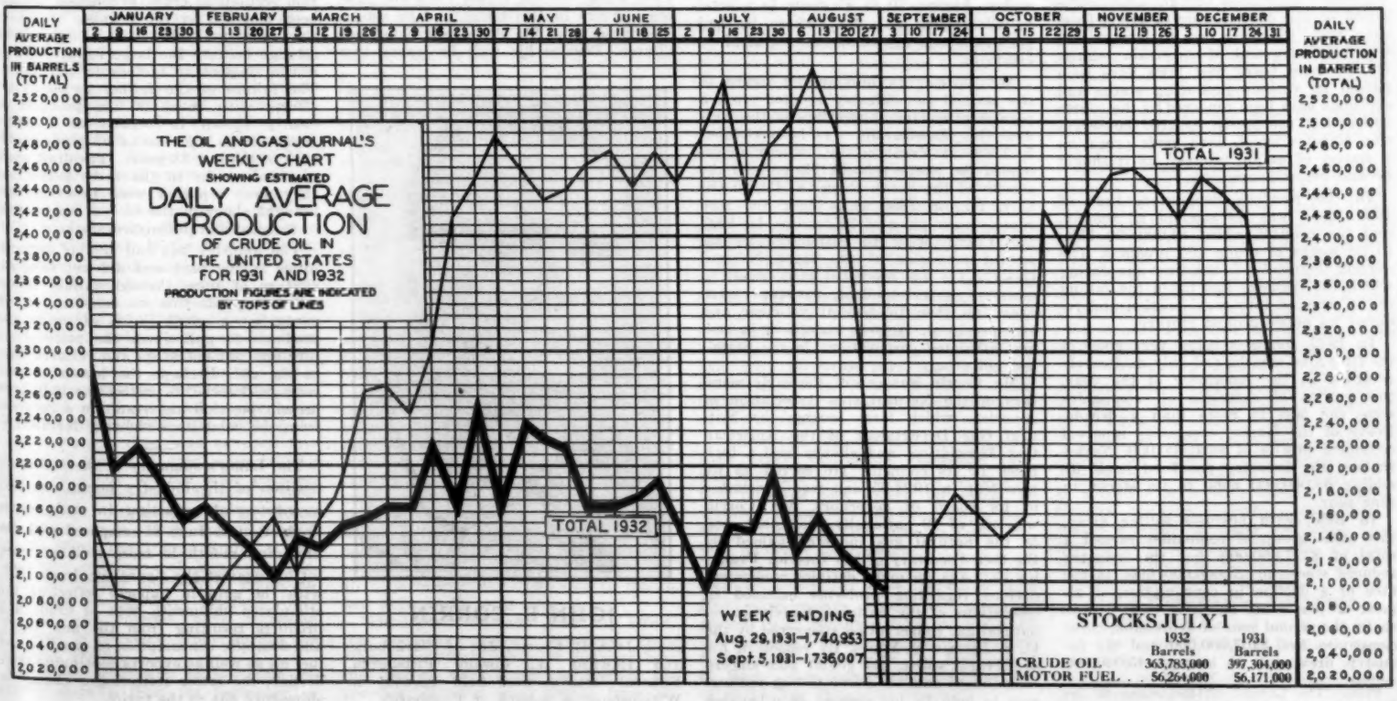
Developments in Texas will be watched with close interest by the industry. Reports that interests opposed to proration were supporting Mrs. Ferguson caused many to believe her election might result in an easing up of restrictions in some of the active areas. It is conceded any substantial increase in crude oil production at this time will result in a decline in the price schedule. The crude production situation is in good shape now and present curtailment efforts must be continued if the existing price schedule is to be maintained. Operators have had the experience of producing far greater quantities of crude at a much less net return than under the present scale. It is doubtful if they desire to return to that situation.

Crude Oil Production in the United States

Estimated daily average production for the week ending August 27, and a comparison with previous week and one year ago, follows:

	Aug. 27	Aug. 20	Aug. 29, 1931
Oklahoma—			
Oklahoma City	70,630	65,840	7,535
Seminole-St. Louis	110,215	117,895	58,520
Remainder of State	205,870	206,530	199,360
Total Oklahoma	386,715	390,265	265,415
East Texas—			
Lathrop	125,936	125,432	(*)
Kilgore	98,317	98,879	(*)
Joiner	103,463	104,487	(*)
Total East Texas	327,716	328,798	
West Texas	172,758	172,561	206,762
North Central Texas	74,495	74,416	74,833
Texas Panhandle	53,671	53,173	59,068
East Central Texas	56,783	56,265	53,938
Gulf Coast Texas	119,144	114,648	120,870
Southwest Texas	58,186	58,195	64,566
Total State of Texas	862,753	858,056	580,037
Kansas	95,220	93,215	99,315
North Louisiana	29,285	29,025	29,650
Gulf Coast Louisiana	32,278	31,512	25,814
Arkansas	34,120	34,210	37,290
Eastern fields	112,000	114,000	107,000
Rocky Mountain area	75,456	75,776	92,432
California—			
Santa Fe Springs	59,000	58,000	61,250
Long Beach	70,000	70,000	77,500
Playa Del Rey	14,750	14,750	22,000
Elwood	13,750	13,750	26,250
Kettleman Hills	59,750	60,250	62,000
Remainder of State	254,750	258,250	255,000
Total California	472,000	475,000	504,000
Total United States	2,099,827	2,101,059	1,740,953

Decrease 1,232 Bbls. Daily



Co-ordination of Refinery Runs With Proration Is Expected to Benefit the Petroleum Industry

Early reports for the first two quarters of this year indicate that not only an isolated oil company here and there made a more satisfactory showing than was the case in 1931, but that such a reversal of results is general. The more strange, since the industry is selling considerably less of its wares than it did in the corresponding months of last year. Wherein lies the improvement and wherefore, and is it susceptible of retention?

The improvement is due to a better measure of control of crude production, and a reduction in refinery runs. Hence, it is reasonable to expect that it can be maintained and carried further if the industry will heed the lesson that overproduction spells waste.

The groundwork of the recovery now manifesting itself was laid prior to the panic of 1929. In 1927 it was apparent to all that the discovery of new oil fields of great potential production, not only in the United States but in foreign countries, together with a realization of the new possibilities of science in recovering more gasoline from a given supply of crude, definitely marked the emergence of the industry from a hand-to-mouth existence. It was recognized that fear of partial exhaustion of our supplies of raw material was a thing of the past, and that the industry could be depended upon to provide from known supplies for a steadily increasing demand for motor fuel. At about that time it was realized that it was no longer sound economic policy to absorb into storage all of the surplus crude that might be produced, to be held until a shortage in current production developed.

Statistical Record of the Industry for May and June, 1931 and 1932

	1932		Increase or decrease	1931	June 1932 inc. or dec. from June 1931
	June	May			
Daily average, U. S. crude production	2,161,000	2,210,000	*—49,000	2,504,000	*—343,000
Daily average, U. S. imports of crude	262,000	164,000	98,000	133,000	129,000
Daily average U. S. crude supply	2,423,000	2,374,000	49,000	2,637,000	*—214,000
Average price, 36° gravity Mid-Continent crude	$0.92	$0.92	.....	$0.36	$0.56
Oil producers completed	993	968	25	603	390
Wells drilling last of month	2,349	2,404	*—55	2,446	*—97
Daily average, U. S. imports of products	120,000	93,000	27,000	80,000	40,000
Daily average, domestic consumption crude and products	2,637,000	2,140,000	497,000	2,617,000	20,000
Daily average, exports crude and products	323,000	382,000	*—59,000	343,000	*—20,000
Daily average, total consumption crude and products	2,960,000	2,522,000	438,000	2,960,000	.....
Total stocks of crude and products	626,487,000	636,077,000	*—9,590,000	666,068,000	*39,581,000
Daily average, crude run to stills	2,411,000	2,409,000	2,000	2,540,000	*—129,000
Daily average, motor fuel production	1,137,000	1,150,000	*—13,000	1,247,000	*—110,000
Daily average, domestic motor fuel consumption	1,309,000	1,032,000	277,000	1,304,000	5,000
Daily average, exports of motor fuel	117,000	149,000	*—32,000	109,000	8,000
Daily average, total motor fuel consumption	1,426,000	1,181,000	245,000	1,413,000	13,000
Total stocks of motor fuel	60,156,000	67,611,000	*—7,455,000	60,164,000	*—8,000
Price of U. S. Motor gasoline, f.o.b. Group 3	4.75c	4.43c	.32c	2.34c	2.41c
Average tank wagon price of gasoline, 50 cities, ex-tax, first of month	13.02c	13.04c	*—.02c	11.19c	1.83c
Average gasoline tax	4.14c	4.13c	.01c	4.01c	.13c
Daily average, domestic consumption gas and fuel oil	778,000	738,000	40,000	901,000	*—123,000
Daily average, exports gas and fuel oil	46,000	75,000	*—29,000	88,000	*—42,000
Daily average, total consumption gas and fuel oil	824,000	813,000	11,000	989,000	*—165,000
Average price, Bunker C fuel oil, ex. terminal, New York harbor	$0.78	$0.72	$0.06	$0.86	*—$0.08

*Decrease.

From "The Lamp," official organ of the Standard Oil Co. (New Jersey).

Reducing Storage

Farsighted operators made plans to reduce the production and purchases in order to draw upon accumulated stocks. Steps were taken to conserve the oil in new flush pools and to regulate the flow to meet current requirements. Proration, long a topic of conversation, became a fact in certain localities, where co-operation of producers among themselves and with state authorities brought about regulation of the daily taking of crude from each well. Proration as it then existed was voluntary and of uncertain tenure. In the three years past laws have been passed in various producing states and decisions have been rendered by the courts supporting previously enacted conservation statutes which have made proration a matter of public interest, as it should be and hence compulsory.

In the previous depression, that of 1921, there was no attempt at control, and the country added 84,000,000 bbls. to its stocks of crude and products. The current depression is the first one during which the industry has taken the falling off in demand into consideration and reduced its above ground storage.

In 1929, business being very good in the first nine months and only moderately retarded in the remainder of the year, the profits of domestic oil companies were the best in more than a decade. Forty of the largest companies reported combined profits of $680,000,000. Nevertheless, the industry penalized itself by adding 68,000,000 bbls. to its stocks in that year.

In 1930, with business falling away, this same group of companies earned a total of $277,000,000, but the industry reduced stocks by 23,000,000 bbls. in the face of a decline in consumption of almost 2 per cent. In 1931, which was really the second year of depression, these companies lost $107,000,000 and the industry drew out of storage 45,000,000 bbls. of oil. The consumption of products that year was off 5 per cent.

Up to August 1, 1932, consumption has declined a further 6.5 per cent. Stocks of crude and products are down 6,000,000 bbls. since the first of the year, despite the speeding up of imports of both crude and gasoline to meet a temporary situation created by imposition of import duties.

In effect, then, the industry has continued its policy of drawing upon accumulated stocks. Imports for the first half of 1932 averaged 300,000 bbls. per day, making a total of 54,000,000 bbls. for the six months. Prior to the agitation for a tax on imports, the average had been 213,000 bbls. per day, so we may consider that between January 1 and July 1 imports were about 15,000,000 bbls. more than they would have been but for the new legislation. Hence, without this excess, there would again have been a still greater reduction of stocks in recent months. Imports are now below 100,000 bbls. per day and if this rate should be maintained for the remainder of the year the total for the 12 months will be around 70,000,000 bbls., which compares with 86,000,000 bbls. imported in 1931.

During July of the current period domestic production and imports, including casinghead gasoline, averaged less than 2,400,000 bbls. daily, an average almost 300,000 bbls. per day less than that for the year 1931. From present indications it is estimated that domestic consumption and exports of gasoline during the current year will be about 8½ per cent less than last year. Part of this is due to loss of exports since the tax was placed on imports. Likewise, domestic fuel oil consumption and exports are running considerably behind the totals for last year.

Results of Proration

In the light of these facts it will be seen that nothing but the results obtained under proration would have saved the industry from demoralization. Even now there is too much oil being produced and too much of it run to gasoline for a healthy competitive situation. Yet there has been such progress in controlling the crude supply in the past two years as to support the belief that further improvement along the same line can be realized. It is evident that the degree of stabilization secured in crude production has not been matched by the refining branch of the industry, which is all the more strange because the large refiners are as a rule important factors in production. The failure of the refiner to match his efforts with those of the producer is clearly shown in reports of domestic crude stocks and stocks of products for each of the last 13 years. The draft made on total stocks in the three years that they were reported were in every case brought about in the face of an increase in finished and unfinished stocks.

The industry has had similar opportunities in the past and did not take advantage of them through failure to coordinate production to consumption. It needs but a small excess of crude and products to pull down the price structure and put operators and refiners alike in the red. Perhaps the lesson of past years will serve to protect the industry's present position and result in a recovery from the calamitous showing for 1931.

The Lamp's summary of the statistical position of the industry points out that a substantial reduction in daily crude production in June as compared with the preceding month is more striking when set off against the figure for June, 1931, with the gain in imports reflecting the stimulated shipments both of crude and products resulting from the new tariff, and domestic consumption of gasoline and fuel oil as well as exports continuing their decline, the latter reflecting a change in shipments due to the tariff.

John B. Corrin, Leader in Natural Gas Industry, Called Suddenly by Death

John B. Corrin, Pittsburgh, Pa., vice president and general manager of the Hope Natural Gas Co., died suddenly Saturday, August 27, in his room in a hotel in Clarksburg, W. Va., where he had gone to attend the annual outing of Hope employes.

Mr. Corrin, an outstanding figure in the natural gas industry and for years a regular attendant at meetings of the Natural Gas Association, was born October 7, 1869, in Franklin, Pa., where he attended the public schools. He entered the service of the South Penn Oil Co. in Oil City, Pa., in 1890 as a clerk and rose rapidly to a place of leadership. In 1902 Mr. Corrin went to Pittsburgh as assistant treasurer of the Hope Natural Gas Co. He was promoted successively to assistant superintendent, assistant manager and then to general manager and vice president. He was an officer in several affiliated corporations in the Standard Oil group.

Mr. Corrin was one of the early members of the Natural Gas Association of America, which later became the Natural Gas Department of the American Gas Association, and always held a high place in its councils. He served as its president in 1924-25 and was a member of its board of governors. Mr. Corrin was one of 10 nationally prominent men in the natural gas industry named by the then Secretary of the Interior Franklin K. Lane, to make definite recommendations regarding problems outlined in resolutions of the national conference on natural gas conservation sponsored by the U. S. Bureau of Mines. By reason of his democratic spirit, his genial and sincere friendliness and his never failing willingness to help by his counsel or otherwise Mr. Corrin was one of the best-loved men in the natural gas industry.

Mr. Corrin was a member of the Pennwood Club, the old Union Club and Masonic orders in Pittsburgh and he was a communicant of the Protestant Episcopal Church. Besides his wife he leaves two

JOHN B. CORRIN

sons, John B. Corrin, Jr., of Clarksburg, and Edward W. Corrin, Pittsburgh. Funeral services were held Tuesday in Wilkinsburg, a suburb of Pittsburgh.

Latin American Production Fifteen Per Cent of World Crude Oil Output for Year 1931

Latin America's growing contribution to the world's petroleum supply comes from eight countries, six of which, including the most important, are in the continent of South America. On the whole, says the Minerals Division of the U. S. Department of Commerce, operations and output tended to increase in these countries up to 1929, when their production reached a peak total of 235,424,000 bbls. of crude oil. The two succeeding years have shown a general decline. Exceptions to the rule are Mexico, whose decline in production has been continuous since 1921, and Argentina, which had a noticeable advance in crude output last year. The production figures of Trinidad and Ecuador are less important but have shown regular annual advances for the past four years. Bolivia first appeared among the producing countries in 1930.

The entire Latin American crude production formed 16 per cent of the world total in 1928, 1929 and 1930, and dropped to 15 per cent last year with the world decline in output. In recent years about two-thirds of the petroleum and products from this area have been exported to foreign markets, the largest producers retaining only small amounts for their own use. Argentina is the only country with important commercial production whose consumption exceeds its output; for many years it has imported regularly a volume of petroleum about equal to what it produced, and has refined the entire amount, domestic and imported, for domestic use.

Venezuela and Mexico

Venezuelan production advanced rapidly during the years when that of Mexico began to decline; it produced more than twice as much as Mexico in 1928 and almost four times as much in 1931, when Venezuelan output formed 58 per cent of the Latin American total. The Venezuelan industry, however, is essentially one of production and export. In 1929 it exported 128,000,000 bbls. of 137,472,000 bbls. produced and in 1930 surpassed that ratio with exports of 137,148,000 bbls. and only 136,669,000 bbls. produced. In 1931 production dropped noticeably to 118,770,000 bbls. and exports were 113,489,250 bbls. About three-fourths of the Venezuelan petroleum goes directly to Curacao or Aruba, for treatment or transshipment, balancing the industry between the two adjacent countries — Venezuela having extensive production without refining operations, and the Netherland West Indies an important refining industry without local production. There is also some shipment to Mexico for treatment, and it has been estimated that, directly or indirectly, about 55 per cent has gone ultimately to the United States.

Mexican production of petroleum, while rapidly and regularly declining, is still second to Venezuela for this area. In 1931 it totaled 33,039,000 bbls. Exports of crude have declined more rapidly than production, since an extensive refinery industry was built up during the years when Mexico was the world's second producer, and refining operations are being continued with a larger proportion of the domestic output than was so used formerly, and there are even some trifling imports of crude for the same purpose. In 1931 Mexico exported 10,257,575 bbls. of petroleum, compared with 12,714,000 bbls. exported in 1930 and 18,981,000 bbls. in 1928. The United States is still the largest purchaser of Mexican crude, taking principally one certain grade, although its receipts have declined. Only Germany and Sweden have increased purchases of Mexican crude during the past four years.

Crude oil production in Colombia increased steadily from its beginning in 1921 to a peak of 20,385,000 bbls. in 1929, and then dropped to 18,237,000 bbls. in 1931. Like Venezuela, Colombia exports practically its entire output of crude, shipments totaling 18,195,053 bbls. in 1929 and 16,989,073 bbls. last year. The share of the United States in these exports has gone from 86 per cent in 1928 to 67 per cent in 1931. In the same period, Canada, second most important purchaser, has increased its receipts of Colombian crude, and in 1931 took 4,954,894 bbls., almost twice as much as in 1930. The remainder of last year's consignments did not vary greatly from the comparative ones for the preceding year, indicating that the drop in exports and probably in production, is attributable to reduced orders from the United States.

Argentine Output Rises

After continuing at about 9,000,000 bbls. a year for some time, the petroleum output of Argentina rose in 1931 to 11,608,000 bbls.; imports of crude oil dropped from 3,835,251 bbls. in 1930 to 2,511,187 bbls. in 1931. No exports of crude are recorded. While the sources of the crude imported last year are not available, records for the three years preceding show that the bulk has been brought from Peru, whose contributions to the Argentine market appear to have increased in about the same ratio as total receipts. In 1930 imports from the United States, Colombia, Mexico and Ecuador also were recorded, whereas in 1928 and 1929 only Peru and Colombia contributed to this trade.

Peru produced 10,106,000 bbls. of crude and Trididad 9,769,000 bbls. in 1931—a decrease for the former and an increase for the latter over the 1930 output. Small amounts were produced also by Ecuador and Bolivia. Peru exported about three-fourths of its output in crude, about half to Argentina and most of the remainder to Canada and the United States. Its imports are negligible. About one-fourth of the Trinidad production is exported to the Netherland West Indies for refinement at the plants which handle the Venezuelan crude. Ecuador sends about half its crude to the United States and much of the remainder to Argentina, retaining little for local use.

Refining Operations

The development of refining in Latin America as a whole, and its consequent influence on world trade, have not kept pace with the growth of crude oil production. The largest producer has no commercial production of refined products except in minute amounts for its own market—a situation somewhat offset by the operations in the Netherland West Indies. The largest foreign sales of products for this area, in fact, are recorded for the latter country, which in 1931 exported 17,038,994 bbls. of gasoline, 489,515 bbls. of kerosene, 800,409 bbls. of lubricating oils, and 63,566,285 bbls. of fuel, Diesel and gas oils, including bunkers. Distribution of these shipments is very wide; there appears to have been a noticeable increase in the number of destinations for gasoline, kerosene, and lubricants each recent year, and in the case of gasoline about four times as many destinations are recorded for 1931 as for 1928. In quantity there was a general decrease in 1930 and 1931, although shipments of gas oil continued to advance and have grown greatly in recent years. In quantity of foreign sales the Netherland West Indies is far in advance of any other of these countries.

Mexico comes second, and during 1931 exported 5,698,199 bbls. of refined products and 6,547,745 bbls. of fuel and gas oils—a small decline from the 1930 record in the former case and a decided drop in the latter, but in neither is the decrease so decided as in crude oil. The drop in shipments to the United States is pronounced, and fuel and gas oil appear to have gone to a much shorter list of destinations than in previous years.

An outstanding growth in exports of gasoline is shown by Trinidad and Tobago, whose combined shipments advanced from 1,124,100 bbls. in 1928 to 1,807,662 bbls. in 1931. Aside from a marked increase in exports to the United Kingdom last year, this growth is fairly evenly spread over a large number of purchasers, with shipments to the United States growing in about the same proportion as the total. Exports dropped somewhat, but not markedly, in 1931.

Standard's Plan of Distributing Work Is Reported to Operate Satisfactorily

NEW YORK, Aug. 29. — Preliminary reports from various operating departments of the Standard Oil Co. (New Jersey) and subsidiaries indicate that the company's recently inaugurated plan for equitable distribution of available work is operating satisfactorily.

"One of the principal obstructions in the way of business improvement," a statement by the company says, "is the problem of the worker who has no job and cannot get one. About the biggest task facing the United States today is the relief of this condition.

"There is a quick way of ameliorating the severity of the emergency. It is the sharing of existing work and payrolls among a larger number. Employers are generally acquainted with the idea, and almost as generally loath to adopt it. For it means readjustment, and change is abhorrent to an organization that is functioning as it should. To split up working time for the sole purpose of adding more names to the paymaster's sheets seems to offer a lot of difficulties. It would not be warranted but for the present emergency.

"But how important are these difficulties when set off against the gain to the nation? For nearly two years the Standard Oil Co. (New Jersey) has been finding out. First put into effect at points where a loss in business due to the depression threatened wholesale discharges, the plan was finally extended to take in the so-called 'white collar' workers and others even where there was no oversupply of employes, so that the shorter week meant taking some on from outside. On July 1 all domestic companies went on a 5-day week to help solve the unemployment problem and give the personnel all practical assurance of keeping their jobs.

Co-operation Smooths Difficulties

"As had been expected, difficulties were met in making application of the shorter week general. In the marketing field are many service stations employing but one or two men at a time and the value of these men depends largely upon their acquaintance with the trade; their absence one day a week interrupts continuity of service. In fact, problems varying in importance arose in many quarters before adjustment to the new basis was completed. However, the personnel, without exception, gave wholehearted co-operation, with the result that in one way or another the employes in all departments were adjusted to the 5-day week or its equivalent.

"Having put the new plan into effect, the company received inquiries from other industries desirous of knowing how the shorter week stood the test of experience. Reports were sought from all departments, and while it is yet too early to arrive at a complete picture of the changes, enough material has come to hand to indicate that the objectives aimed at have been achieved and that the consequences threatened have not been realized.

"Toward the solution of the unemployment situation the 5-day week schedule resulted in immediate employment of some 450 persons in subsidiaries representing less than half the total payroll, and excluding a large domestic company from which complete returns are not available. It has also made clear that additional employment is to be expected as the program becomes fully effective, with work and employment properly balanced.

Layoffs Avoided

"Another important result was the retention of workers who were doomed to lay off or discharge had the 6-day week been continued. As a matter of fact, 180 employes would have had their service terminated July 1 but for the division of work which took effect on that date. Together with the reduction in time in refineries, producing, pipe line and gas operations which have been inaugurated since September, 1930, the net effect of the several efforts to retain employes by reducing hours of work has meant jobs to some 2,900 employes, or 9 per cent of the total on the payrolls of the domestic companies concerned. Where employes have been laid off for reasons other than inefficiency it has been due to inability to fit them into work for which they lacked the necessary training.

"One of the most striking features is that no field manager or department head has found that shorter working hours have brought about a drop in efficiency; on the contrary there has been a real gain through the resumption of the policy of promotions which were practically ended so long as men were being laid off. Wherever possible full or part time vacancies have been filled by promotions from lower positions, such additional help as needed being taken on at the bottom.

"Since the plan is flexible, employes have every reasonable assurance that they will not be out of work, no matter how business goes, except for cause. If necessity arose, it would be a simple matter to further divide time to meet further recession in business.

"There is no simple formula applicable to all cases. Each employer will find some reasons against changing his present time schedule. The character of the emergency dwarfs the difficulties and facilitates their solution. In fact, many of them solve themselves once the will to make the change is shown."

A.P.I. DIRECTORS TO MEET

Members of the board of directors of the American Petroleum Institute have been called to meet at the office of the Institute in New York, Thursday morning, September 8.

Use of Arc Welded Alloys to Arrest Corrosion of Ordinary Small Refinery Equipment

By RAYMOND S. HOFFMAN
Standard Oil Co. of New Jersey*

The expensively corrosive action of "sour" crude oils on the cracking equipment in use in a modern oil refinery is well known throughout the oil industry. Pipe line joints on cracking apparatus are usually made with carbon steel flanges, valves, crosses, tees and other carbon fittings. This paper describes how these carbon fittings, under the supervision of the author, have been successfully protected, and important monetary savings effected, with arc welded alloy metals. The method itself is simple, and involves mainly the seclection of the proper alloys to be used in the particular cases, and then the application of the electric arc welding process.

Appended to this text are illustrations numbered from 1 to 9, inclusive, and a chart giving complete data on unit costs, percentage savings, and total savings.

The alloy metal used in the fittings shown in the accompanying cuts is a combination chromium-nickel, and usually is referred to as KA2 or NCT 3 alloy; it may be purchased in the open market from several different manufacturers.

In the illustrations it is shown how the alloy protection is applied to the several different kinds of fittings, the general principle being the same in all cases.

Cut No. 7 shows a forged carbon steel pipe flange, counterbored one-half inch deep and 1⅜ inches wide, into which the alloy metal has been deposited by means of the electric arc and a flux coated five-thirty-seconds-inch diameter KA2 electrode. It may be interesting to note that in this particular type of flange, the pipe is rolled into the two grooves shown, and then flared at the ends very similar to a tube rolling operation. The V-shaped groove shown is machined into the deposited alloy metal to receive the metal ring gasket now used in this type of high pressure, high temperature oil refining apparatus.

Cut No. 5 illustrates two flanges properly protected and bolted together in working position. The electrically deposited alloy metal is shown with the metal ring gasket in place. The pipe is shown rolled, flared and arc welded circumferentially at the heel of the flange. It will be observed in this illustration that the corrosive liquids cannot come in contact with the carbon flanges at any point. Up to this time we have actually protected 300 flanges in this manner, with a saving of 16.6 per cent over the straight carbon flange without protective coating.

On referring to Cut No. 3, it will be noted that in addition to the counterboring operation and the deposited metal, the nozzle was first lined with an alloy sleeve. This is a very simple job, the sleeve, cut to proper length, being driven into position before the arc welded deposit is applied to the counterbore. After the deposit is made, the V-shaped ring joint groove is machined in the deposited metal.

The protection shown in Cut No. 3 is similar to that shown in Cut No. 1, except that the latter is a field operation on a 120-ton "soaking" drum. As a matter of interest, we mention that the drum is lined with concrete, and the alloy sleeve is projected through the wall thickness of the drum, as shown, to allow for the interior concrete lining.

The lined cross shown in Cut No. 9 is merely an extension of the operation shown in Cut No. 3, with the weld at the junction of the sleeves omitted, because of inaccessibility.

The sleeves in Cut No. 8 are formed to suit the contour of the reducing tee, driven into position and welded as shown, where the reduced liner is joined by the short section on the smaller end.

Replace Gate Guides

In Cut No. 4 is shown the method used to replace the gate guides in steel gate valves which were almost entirely corroded away, the valve being otherwise in perfect condition. The guide pieces, two to each valve, are formed from sections cut from scrap alloy tubing, and are welded in place with alloy flux coated electrodes. This makes a most satisfactory repair from every standpoint, including a saving of 58.7 per cent. In Columns I and K of the savings chart, where the term "lined fittings" is used, it must be understood that, in the case of the 4-inch gate valve, we refer to the guides only.

Cut No. 2 illustrates the method proposed for the protection of high pressure ball check valves. We have not included this in the savings chart because sufficient data was not available at the time this paper was prepared.

Some of the largest savings have been made on the inlet and outlet connections, as shown in Cut No. 6, where these cast steel fittings have been protected by the same general methods, and where savings of 87.6 per cent are shown.

All welding in the cases we have described was performed with five-thirty-seconds-inch flux coated KA2 electrodes used in portable direct current generators, operated with 20 to 22 volts across the arc and 150 amperes. The polarity was reversed from normal, i.e., the electrode constituted the positive terminal and the "ground" the negative terminal.

The figures in Columns M and N for any particular fitting in Column A on the savings chart, were calculated by the following simple formula, in which the letters refer to the data in the similarly lettered columns of the chart.

$$M = \left[(D + G)\frac{F}{E}\right] - I$$

Note: G is omitted in the six cases of flow and release lines shown on the chart in Column B, because these fittings are regularly removed for the cleaning of coke deposits and inspection, and is therefore a part of the regular operating cost, and could not properly be included in savings.

$$N = \frac{M}{\frac{F}{E} \times D}$$

$\frac{F}{E} = 3\frac{2}{3}$, where usage of fittings was increased from 6 months to 22 months;

$\frac{F}{E} = 1\frac{1}{2}$, where usage was increased from 12 to 18 months; and

$\frac{F}{E} = 2\frac{1}{4}$, where increase was from 8 to 18 months.

For example:

The 92 fittings in Column "C" originally cost $1,705.68 and in six months' time they were corroded to a point which made necessary their replacement, had we not been able to protect them by the method already described. After applying the protective coatings at a total cost shown in Column I, they were again placed in service for the time shown in Column F, 22 months. If it had not been possible to protect these fittings, it would have been necessary to replace them $3\frac{2}{3}$ times in 22 months. The saving, M, on this item, is therefore, applying the formula for M:

$(\$1{,}705.68 \times 3\frac{2}{3}) - \$2{,}013.88 = \$4{,}240.29$

which is a percentage saving, N, of

$\frac{4{,}240.29}{6{,}254.16}$, or 67.8 per cent.

It should be borne in mind that the routine operation of oil cracking apparatus requires the periodical removal of flow and release line fittings for inspection and the removal of coke deposits. The labor cost of this inspection and coke removal should, therefore, not be included in the formula for calculating savings in the above illustrations. However, G, the labor cost, is added in all those cases where, on account of corrosion, the fittings were removed.

For example:

The thirty-two 3-inch nozzles, cast steel flanged, Series 50, shown in Column C, originally cost $908, but $800, as shown in Column G, must be added, since this is the labor cost for replacement made necessary solely on account of corrosion. Therefore, in arriving at the savings effected by the alloy protection, we have:

$M = (908 + 800) 3\frac{2}{3} - 1{,}095 = \$5{,}167.67$

$$N = \frac{5{,}167.67}{6{,}262} \text{ or } 82.5 \text{ per cent.}$$

Since scrap material was used for all linings, and the value of this scrap is negligible, no material cost is included in Column H.

The comparison in Columns J, K and

*Paper entered by Raymond S. Hoffman, mechanical superintendent of the Bayway refinery of the Standard Oil Co. of New Jersey in the second arc welding contest fostered by the Lincoln Electric Co.

MONETARY SAVINGS (SUMMARY) BY USE OF ARC WELDED ALLOY LINED FITTINGS IN HIGH PRESSURE CRACKING APPARATUS

A	B	C	D	E	F	G	H	I	J	K	L	M	N
				Comparative life					Comparative cost				
Description and size:	Kind of service	Total No. lined fittings used to date	Original cost of fittings	Unlined fittings months	Lined fittings months	Labor cost of replacing steel fittings	Cost of lining fittings	Total cost of lined fittings	One unlined fitting	One lined fitting	One solid alloy fitting	Total saving to date by using lined fittings	Pctg. saving to date
3" Cast steel flanged tee, Series No. 50	Flow lines low pressure cracking coils	92	$1,705.68	6	*22	(†)	$308.20	$2,013.88	$18.54	$21.89	$54.25	$4,240.29	67.8
4x3x4 Tees, cast steel flanged, Series No. 50	Flow lines low pressure cracking coils	8	480.00	6	*22	(†)	39.20	519.20	60.00	64.90	101.80	1,240.80	70.5
6x4x4 Tees, cast steel flanged, Series No. 50	Release lines low pressure cracking coils	8	127.28	6	*22	(†)	58.00	185.28	15.91	26.00	125.00	281.41	60.2
3" Nozzle, cast steel flanged, Series No. 50	Bubble tower low pressure cracking coils	32	908.00	6	*22	$800.00	187.00	1,095.00	28.375	34.20	35.10	5,167.67	82.5
6" Nozzle, cast steel flanged, Series No. 30	Bubble tower low pressure cracking coils	4	207.32	6	*22	150.00	22.00	227.32	51.955	56.96	64.05	1,084.19	82.6
4" Cast steel inlet and outlet for coil	Soaking drum low pressure cracking coils	16	480.00	6	*22	737.20	96.00	576.88	30.00	36.00	102.25	4,070.40	87.6
4" Cast steel flanged tees, Series No. 90	Flow lines, 750-lb. cracking coils	19	736.25	12	*18	(†)	290.26	1,026.51	38.75	59.30	141.60	77.96	7
6x4x4 Tees, cast steel flanged, Series No. 90	Release line, 750-lb. cracking coil	8	550.56	12	*18	(†)	128.08	678.64	68.82	84.58	302.40	147.20	17.8
4" Nozzles, cast steel flanged, Series No. 90	Bubble tower and accumulator, 750-lb. cracking coils	12	480.00	12	*18	360.00	78.00	558.00	40.00	46.50	78.85	702.00	55.7
4" Flanges, forged steel, Series No. 1350	Lines at 750-lb. cracking coils	300	1,896.00	12	*18	2,085.00	3,105.00	5,001.00	6.32	16.66	20.60	970.50	16.2
6x5x4 Tees, cast steel flanged, Series No. 90	Flow lines, 750-lb. cracking coils	2	152.00	12	*18	(†)	43.00	195.00	76.00	97.50	314.85	33.00	14.4
4" Gate valve, cast steel flanged, Series No. 900	Release and flow lines, 750-lb. cracking coils	11	2,675.40	3	*18	240.00	128.42	2,703.82	191.10	193.13	(‡)	3,855.83	58.7
Total amount of money that would have to be expended if alloy lined fittings were not adopted												$36,851.30	
Total cost of lined fittings												14,780.15	
Total savings											Total savings	$21,871.15	59.6

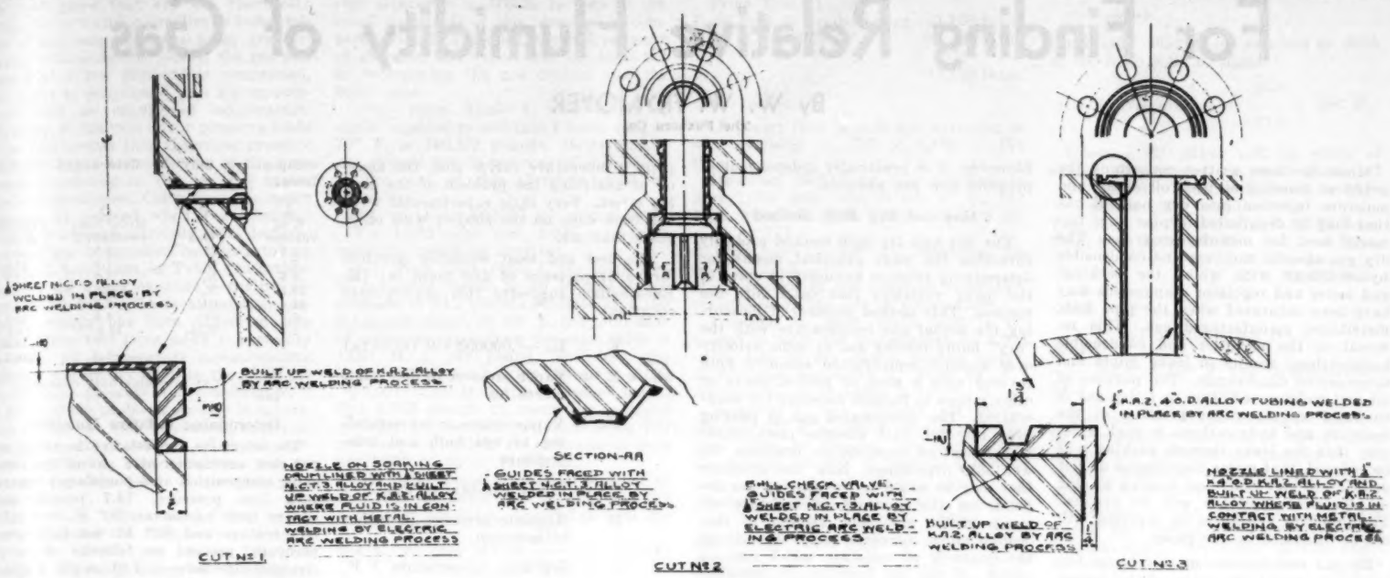
*Indefinite in service; still good. †Fittings have to be cleaned after each run, so replacing cost is negligible. ‡Cost of alloy guides. §Prohibitive.

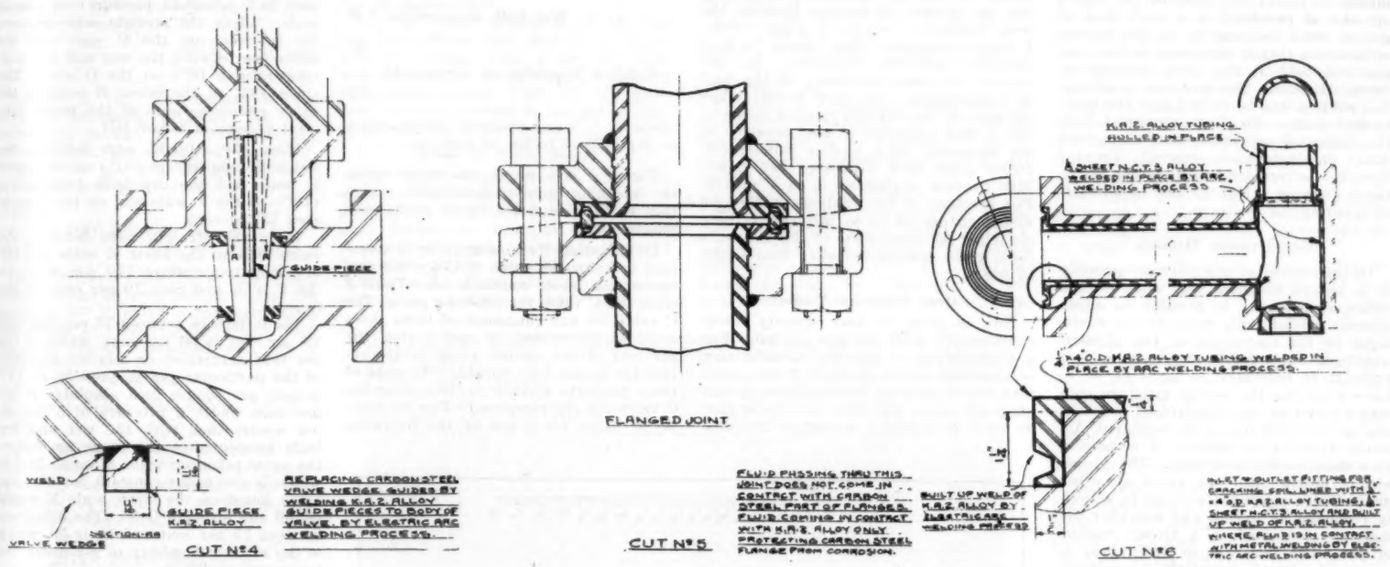
L shows that the cost of the lined fitting is, in most instances, but little more than the cost of the original unlined fitting, and a great deal less than the cost of the solid alloy fittings or forgings, even if alloy forgings could be satisfactorily produced.

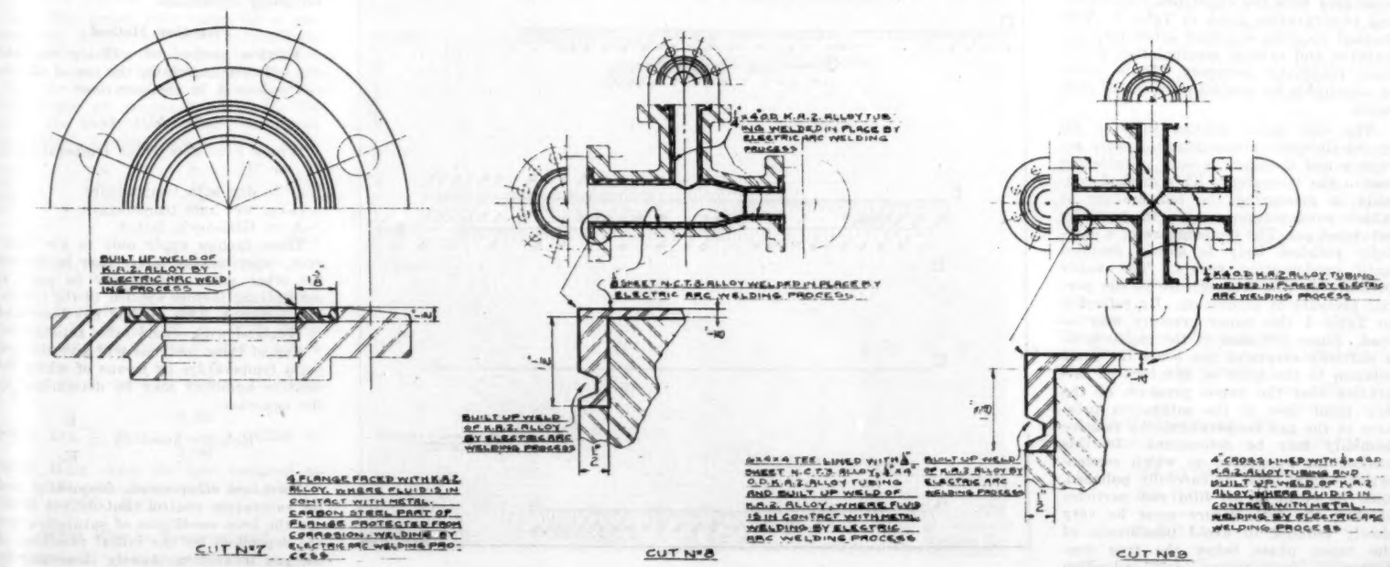
Life of Lined Fittings

We show in Colum F the actual life of the lined fittings to date, but since alloy welded linings show no appreciable corrosion after months of service, "F" in the formula could be increased to practically the life of the equipment itself, and from this it will be seen that the actual moneary savings might be considered far in excess of the figures shown in Column M, and the total saving of $21,871.15 should be proportionately increased.

It seems that engineers, designers and manufacturers could profitably consider the more extended use of the arc welding process in conjunction with alloy electrodes, in combatting the costly corrosive action of crude oils and other liquids on expensive oil refining apparatus.


SHEET N.C.T.3 ALLOY WELDED IN PLACE BY ARC WELDING PROCESS
BUILT UP WELD OF K.A.2. ALLOY BY ARC WELDING PROCESS
NOZZLE ON SOAKING DRUM LINED WITH SHEET N.C.T.3. ALLOY AND BUILT UP WELD OF K.A.2. ALLOY WHERE FLUID IS IN CONTACT WITH METAL. WELDING BY ELECTRIC ARC WELDING PROCESS
CUT No 1.
SECTION-AA
GUIDES FACED WITH SHEET N.C.T.3. ALLOY WELDED IN PLACE BY ARC WELDING PROCESS
CUT No 2
FULL CHECK VALVE GUIDES FACED WITH SHEET N.C.T.3. ALLOY WELDED IN PLACE BY ELECTRIC ARC WELDING PROCESS
BUILT UP WELD OF K.A.2. ALLOY BY ARC WELDING PROCESS
K.A.2. 4 O.D. ALLOY TUBING WELDED IN PLACE BY ARC WELDING PROCESS
NOZZLE LINED WITH K.A.2. O.D. ALLOY AND BUILT UP WELD OF K.A.2. ALLOY WHERE FLUID IS IN CONTACT WITH METAL. WELDING BY ELECTRIC ARC WELDING PROCESS
CUT No 3


GUIDE PIECE
WELD
GUIDE PIECE K.A.2. ALLOY
SECTION-AA
VALVE WEDGE
REPLACING CARBON STEEL VALVE WEDGE GUIDES BY WELDING K.A.2. ALLOY GUIDE PIECES TO BODY OF VALVE. BY ELECTRIC ARC WELDING PROCESS
CUT No 4
FLANGED JOINT
FLUID PASSING THRU THIS JOINT DOES NOT COME IN CONTACT WITH CARBON STEEL PART OF FLANGES. FLUID COMING IN CONTACT WITH K.A.2. ALLOY ONLY PROTECTING CARBON STEEL FLANGE FROM CORROSION.
CUT No 5
K.A.2. ALLOY TUBING RULLED IN PLACE
SHEET N.C.T.3 ALLOY WELDED IN PLACE BY ARC WELDING PROCESS
K.A.2. O.D. K.A.2 ALLOY TUBING WELDED IN PLACE BY ARC WELDING PROCESS
BUILT UP WELD OF K.A.2. ALLOY BY ELECTRIC ARC WELDING PROCESS
INLET & OUTLET FITTINGS FOR CRACKING COIL LINED WITH K.A.2. O.D. K.A.2. ALLOY TUBING & SHEET N.C.T.3. ALLOY AND BUILT UP WELD OF K.A.2. ALLOY. WHERE FLUID IS IN CONTACT WITH METAL WELDING BY ELECTRIC ARC WELDING PROCESS.
CUT No 6


BUILT UP WELD OF K.A.2. ALLOY BY ELECTRIC ARC WELDING PROCESS
4" FLANGE FACED WITH K.A.2. ALLOY. WHERE FLUID IS IN CONTACT WITH METAL. CARBON STEEL PART OF FLANGE PROTECTED FROM CORROSION. WELDING BY ELECTRIC ARC WELDING PROCESS
CUT No 7
4" O.D. K.A.2. ALLOY TUBING WELDED IN PLACE BY ELECTRIC ARC WELDING PROCESS
SHEET N.C.T.3. ALLOY WELDED IN PLACE BY ELECTRIC ARC WELDING PROCESS
BUILT UP WELD OF K.A.2. ALLOY ELECTRIC ARC WELDING PROCESS
8"x8"x4" TEE LINED WITH SHEET N.C.T.3. ALLOY, & 4" O.D. K.A.2. ALLOY TUBING AND BUILT UP WELD OF K.A.2. ALLOY, WHERE FLUID IS IN CONTACT WITH METAL. WELDING BY ELECTRIC ARC WELDING PROCESS
CUT No 8
4" O.D. K.A.2 ALLOY TUBING WELDED IN PLACE BY ELECTRIC ARC WELDING PROCESS
4" CROSS LINED WITH 4" O.D. K.A.2. ALLOY TUBING AND BUILT UP WELD OF K.A.2 ALLOY, WHERE FLUID IS IN CONTACT WITH METAL. WELDING BY ELECTRIC ARC WELDING PROCESS
CUT No 9

Wet and Dry Bulb Method Is Recommended For Finding Relative Humidity of Gas

By W. W. FRYMOYER
The Foxboro Co.

Much has been written concerning the practical benefits of both oil spray and moisture injection into dry natural gas that may be distributed in pipe lines formerly used for manufactured gas. The dry gas absorbs moisture and condensible hydrocarbons with which the packings and meter and regulator diaphragms may have been saturated when the pipe lines distributed manufactured gas. This removal of the moisture and condensible hydrocarbons results in leaky joints and deteriorated diaphragms. The purpose of oil and moisture addition to a dry gas is to build up the vapor pressure of the moisture and hydrocarbons to such a degree that the leaks through packing will be reduced, that meter diaphragms do not deteriorate and that dust tending to clog up domestic appliance will be avoided. The problems arising in oil spraying will not be discussed in this paper.

By per cent saturation or relative humidity is meant the ratio of the actual amount of moisture in a cubic foot of gas at some temperature to the amount of moisture that a cubic foot of the same gas will hold at the same temperature when saturated. The problems in saturation control may be divided into two quite related parts: the first connected with the degree of saturation and the second with the saturation control, showing how it is affected by temperature variations, pressure variations and by methods of injecting the moisture.

Measurement Methods

In the control of any physical quantity it is always assumed that some method exists that makes it possible to either directly or indirectly measure the variations in the magnitude of the physical quantity. Since degree of saturation is a ratio it is necessary to measure or to have available the actual moisture content as well as the standard of moisture content to which it is to be compared. Actually there is no method of measuring this ratio except indirectly. The standard of measurement to which all other methods are compared consists in actually removing by drying and weighing the moisture contained in a known volume of gas. The moisture so determined is compared with the quantities corresponding to saturation given in Table 1. This method requires elaborate laboratory apparatus and careful manipulation to insure reasonable accuracy. It is utterly unsuitable for control purposes or field work.

The dew point method likewise requires elaborate precautions to insure accuracy and therefore is only suitable for use in the laboratory. This method consists in measuring the temperature at which condensation occurs in partially saturated gas. The temperature of a carefully polished body is slowly dropped until condensation occurs. The vapor pressure at this temperature is the partial pressure of saturation. By referring to Table 1 this vapor pressure may be read. Since the mass of the moisture in a partially saturated gas bears the same relation to the mass of moisture at saturation that the vapor pressure at the dew point does to the saturation pressure at the gas temperature, the relative humidity may be determined. In this method the apparatus on which condensation occurs must be carefully polished, must be clean of all film and particles of dirt, the temperature must be very slowly reduced to avoid persistence of the vapor phase below the true condensation temperature and vibration must be avoided for consistent results. However, it is practically independent of pressure and gas analysis.

Wet and Dry Bulb Method

The wet and dry bulb method probably furnishes the most practical means for determining relative humidity in spite of the many variables that enter into the method. This method consists of measuring the actual gas temperature with the "dry" bulb; forcing gas at some velocity over another temperature sensitive bulb covered with a wick or porous sleeve or other means to furnish moisture for evaporation. The unsaturated gas in passing over the wet bulb absorbs more water whose heat of vaporization produces the wet bulb depression. Now the moisture that may be added to the passing gas depends on the quantity of moisture already in the gas. The amount of this cooling effect therefore varies directly as the quantity of moisture which can be added. If the gas increases in pressure the gas density increases; likewise the heat required to change a given volume 1 degree increases. This change in heat capacity produces variations in the amount of cooling produced by the heat of vaporization. In other words, when the heat of vaporization remains constant the cooling decreases if heat capacity of gas increases. In a similar manner different gases with different heat capacities produce variations in this cooling. For instance, if the analysis of the gas should change so as to increase its heat capacity, the depression of the wet bulb for a given relative humidity then would be less.

Heat Capacity Varies

Now in gases the heat capacity varies considerably with the gas analysis. For a given volume of gas this variation may be expressed as the product of the molecular weight and the specific heat at constant pressure. Just how this factor may be used to actually determine the dew point temperature varies with the method of analyzing the problem of the cooling effect. Very little experimental work has been done on the subject with other gases than air.

The best and most workably equation for vapor pressure of dew point is: (E. Buckingham suggested this approximate equation)

$$E = E_w - .000053\ CB\ (t_d - t_w)$$

where E = Vapor pressure of dew point inches hg.

E_w = Vapor pressure corresponding to wet bulb and temperature

C = Molar constant of gas

B = Absolute pressure in inches of mercury

t_d = dry bulb temperature ° F.

t_w = Wet bulb temperature ° F.

Relative humidity is expressed: $\frac{E}{E_d}$

when E_d = vapor pressure corresponding to dry bulb in inches of mercury.

Figure 1 is a nomogram which solves the foregoing equation graphically except that B, E, E_d and E_w are in pounds per square inch.

In operating the nomogram it is necessary to know the value of C for the particular gas under consideration. Table 3 gives the C value for different gases. The C value for any compound of these gases may be determined by multiplying the per cent of the various gases by the respective molar heat values. The sum of these products divided by 100 gives the C value for the compound. For example, the C value for a gas of the following composition may be determined as follows:

A % of volume	B Gas	C Molar heat constant C	Product A×C
1.5	CO_2	8.9	13.4
3	O_2	7.0	21.0
3.5	N_2	7.0	24.5
52.5	H_2	6.9	362.0
31.4	CH_4	8.6	270.0
8.6	CO	7.0	60.2
2.5	C_2H_6	11.8	29.5
			780.6

$$\frac{780.6}{100} = 7.81 = \text{molar heat constant}$$

Determining Relative Humidity

To determine the relative humidity or per cent saturation of a gas of the foregoing composition at 5 pounds per square inch line pressure, 14.7 pounds per square inch barometer, 70° F. dry bulb temperature and 62° F. wet bulb temperature, proceed as follows: Place a straight edge between 7.81 on the A scale and 19.7 (absolute pressure) on the B scale. Place the straight edge between the intercept on the C scale and the difference between the wet and dry bulb temperatures (8°) on the D scale. The value .066 on the lower E scale is the vapor pressure value of the molar constant correction factor (C).

Place the straight edge between the wet bulb temperature (62°) on the upper E scale and the dry bulb temperature (70°) on the F scale and on the C scale read 75 per cent.

Place the straight edge between the value .068 on the lower E scale and the dry bulb temperature (70 per cent) on the F scale and read 19 per cent on the G scale.

The difference between 75 per cent and 19 per cent is 56 per cent, which is the per cent saturation or relative humidity of the particular gas in question at 19.7 pounds per square inch absolute. If air has been under a pressure of 5 pounds per square inch with the wet and dry bulb temperatures the same as before, the value taken on scale A would be 7.0, which is the molar constant for air; the value found on the lower scale E would be .06 and on scale G 16. The difference between 75 per cent and 16 is 59, which is the relative humidity of air under the foregoing conditions.

Another Method

Another method of utilizing wet and dry bulb readings is by the use of Glaisher's values A in the equation:

$$t = t_d - A(t_d - t_w)$$

Where t = dew point temperature in °F. or °C.

t_d = dry bulb temperature.

t_w = wet bulb temperature.

A = Glaisher's factor.

These factors apply only to air. However, experimental values may be derived for other gases which may be used as multiplying factors applied to the Glaisher's factor A. This method has been used in England with considerable satisfaction.

Any of these methods will give the dew point temperature by means of which the relative humidity may be determined by the equation:

$$\text{Relative humidity} = \frac{E}{E_d}$$

There are other means frequently used for saturation control that do not measure the true conditions of saturation but are dependent on the initial condition of the gas saturation. Among these may be listed the heating effect of the steam in-

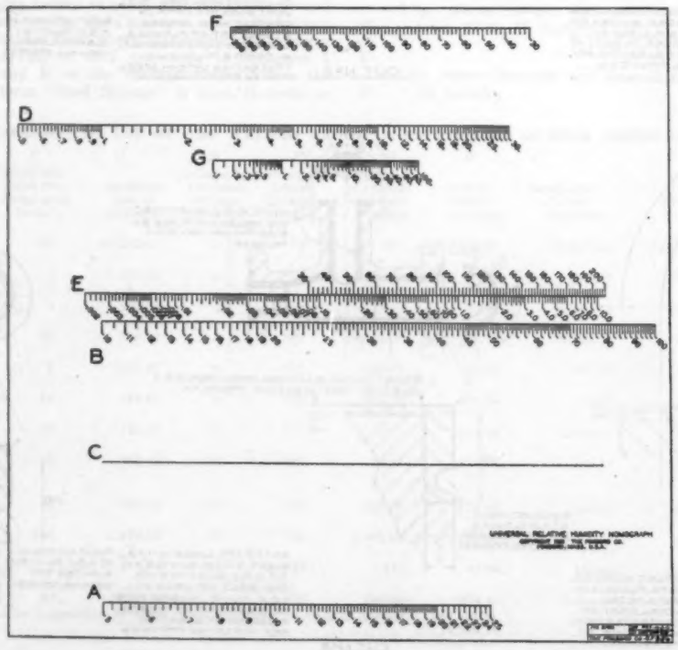


Figure 1

jection or the cooling effect of the water spray. In as much as these methods are intimately connected with control itself, they will be discussed under problems connected with saturation control.

Problems of Saturation Control

Vapor pressure of moisture contained in most gases that are not chemically attracted by water is practically independent of pressure when the gases are saturated with moisture. Now if the gas saturated at a low pressure is compressed, the vapor is compressed to a higher pressure with no change in temperature. However, if this new vapor pressure tends to become greater than the vapor pressure of water vapor corresponding to the temperature existing in the gas the excess moisture condenses. Conversely the vapor pressure is reduced when gas saturated at a high pressure expands. This decrease in moisture is graphically illustrated in Figure 2, from data in Table 4. Furthermore, when a gas expands a cooling effect occurs due to the fact that some potential energy has been converted into work. These two facts make it necessary to make all temperature measurements, whether wet or dry bulb, in the same gas at the same pressure and temperature.

Many of the problems arising in saturation control can only be satisfactorily presented by actual solution of these problems in physics. These problems will be presented in the form of questions and answers.

Question 1. How much heat is required to raise the temperature of 1,000 cubic feet of dry gas of the following analysis, 5 pounds per square inch gauge pressure and 14.7 pounds per square inch barometer from 70° to 71° F.,

CH_4	95.0%
C_2H_6	2.5%
N_2	2.5%

Solution 1. (a) The density of air when the barometer is 29.92" Hg. and temperature is 32° F. = .0807 pounds per cubic foot. The density of air at 70° F. by Charles law is as the inverse ratio of the absolute temperature or

$\frac{32+460}{70+460} \times .0807 =$ density at 70° F. or .0749 lbs. per cu. ft.

(b) By Boyle's law the density varies directly as the absolute pressure. Now the density at 70° F. and 5 pounds per square inch gauge 14.7 pounds per square inch barometer can be determined from (a) by multiplying

$\frac{14.7+5}{14.7} \times .0749 = .1005$ lbs. per cu. ft.

(c) The specific heat of air at constant pressure C_p—.2375 B.t.u. per pound. Therefore, the heat required to heat 1 cubic foot of air 1° F. at 19.7 pounds per square inch absolute and 70° F.= (b) $\times C_p$ or

$.2375 \times .1005 = .2039$ B.t.u.

(d) The molar heat value for a gas takes both density and specific heat into consideration. The data given in Table 3 may be used to determine relation between the heat required to heat 1 cubic foot of gas as compared with air. To secure the molar heat value for gas of the analysis specified would give:

Gas	%	C	
CH_4	95.0	8.6	=817.0
C_2H_6	2.5	11.8	30.0
N_2	2.5	7.0	18.0
			865.0

865÷100=8.65
Molar heat value for air=7.00

(e) Under (c) heat required to heat 1 cubic foot of air at 19.7 pounds absolute and 70° F., 1° F. = .0239 B.t.u. But this gas has a ratio to this value of $\frac{8.65}{7.00}$ or B.t.u. required to heat this particular gas 1° F. $= \frac{8.65}{7.00} \times .0239 =$ .02925 B.t.u. Now the heat required to heat 1,000 cubic feet would be 1,000 × .02925 = 29.50 B.t.u.

What Rise in Temperature?

Question 2. Assuming the gas in question one is 10 per cent saturated what rise in temperature will be produced by the injection of sufficient steam, from 10 pounds gauge pressure, to produce saturation?

Solution 2. (2a) Since the saturation pressure of water vapor at 70° F. is .3628 (see Tabl 1), vapor pressure at 10 per cent saturation is .03628. In view of the small magnitude of this pressure as compared with 19.7 pounds, the full pressure of the gas, the vapor may be neglected in determining the gas density and the molar heat.

(2b) From Table 1, the weight of water required to saturate 1 cubic foot at 70° F. is .001151 pounds. However, the gas already has 10 per cent of this. Ninety per cent of this therefore must be added or

90% × .01151 = .001035 lbs. of moisture

For 1,000 cubic feet, 1.035 pounds of moisture would be required.

(c) Now from Table 1, the total heat of saturated steam at 10 pounds gauge pressure or 24.7 pounds absolute = 1,160 B.t.u. per pound. At 70° F. the total heat of steam or vapor from the same table is 1,091 B.t.u. per pound. Therefore, the heat available for heating the gas is .1160 — 1,091 = 69 B.t.u. per pound of steam. But 1.035 pounds of steam are required to bring 1,000 cubic feet from 10 to 100 per cent saturation. B.t.u. available then are 1.035 × 69 = 71.4 B.t.u.

(d) The temperature rise is equal to the heat available for heating (see c) divided by the B.t.u. required to heat the gas 1° F. (see 1e) or $\frac{71.4}{29.5} = 2.4°$ F. rise in temperature.

(e) If initial saturation of the gas had been 55 per cent instead of 10 per cent the heating effect would have been that produced by addition of 45 per cent of moisture instead of 90 per cent moisture or heating effect is one-half of (d) or 1.2° F.

Effect of Extra Steam

Question 3. If the gas had been oversaturated what would be the effect of the extra steam upon the temperature of the gas? Assume for example that 15 per cent extra moisture is added in excess of that required for saturation.

Solution 3. From (2b) the steam required for saturation is 1.035 pounds.

(a) Fifteen per cent of 1.035 pounds = 1.55 pounds per 1,000 cubic feet.

(b) The steam going into saturating the gas remains in the vapor state. However, any extra steam condenses making available for heating the heat of condensation.

From Table 1:

Total heat 10 pounds gauge	=1,160 B.t.u.
Heat of liquid 70° F.	= 38 B.t.u.
	*1,122 B.t.u.

*Per pound.

However, .155 pounds are available or heat available = .155 × 1,122 = 174 B.t.u.

However, 29.5 B.t.u. are required to heat 1,000 cubic feet of gas 1° F., 174 B.t.u. then will raise temperature an additional $\frac{174}{29.5} = 5.9°$ F., neglecting the slight change in the point of saturation occasioned by the rise in temperature.

Question 4. How much heat is required to raise the temperature of 1,000 cubic feet of dry gas 5 pounds gauge, 14.7 pounds barometer, 1° F. at 40° F.? Analysis as in Question 1.

Solution 4. (a) Density air 29.92" Hg. and 32° F. = .0807 pounds per cubic foot. Then by Charles and Boyle's law the density at 40° F. and 19.7 pounds absolute — $.0807 \times \frac{19.7}{14.7} \times \frac{492}{500} = .106$ pounds per cubic foot; .2375 B.t.u. per pound × .106 = .0252 B.t.u. per cubic foot. B.t.u. per 1,000 cubic feet = 25.20 for air. But gas of analysis given required $\frac{8.65}{7.00} \times 25.20 = 31.2$ B.t.u. per 1,000 cubic feet.

Question 5. Assuming again 10 per cent saturation, what rise in temperature will be produced by injection of steam from 10 pounds pressure to produce saturation at 40° F.?

Solution 5a. See Table 1.

Saturated vapor pressure 40° F. = .1217 pounds per square inch.

From Table 1 weight of water vapor required to saturate at 40° F. = .000409 pound per cubic foot. But only 90 per cent need be added. Hence actual requirements are 90 × .000409 = .0003681 pound per cubic foot. For 1,000 cubic feet, this equals .3681 pound steam (b).

Total heat at 10 lbs. gauge	=*1,160 B.t.u.
Total heat at 40° F.	= 1,077 B.t.u.
	*83 B.t.u.

*Per pound.

But only .3681 pound required or .3681 × 83 = 30.6 B.t.u. added.

Rise in temperature — $\frac{30.6}{31.2} = .98°$ F.

Question 6. What will be effect of adding 15 per cent too much moisture?

Solution 6. Additional pounds = 15% × .3681 = .055 pound.

Total heat at 10 lbs. gauge	=1,160 B.t.u.
Total heat liquid 40° F.	= 8 B.t.u.
	*1,152 B.t.u.

*Per pound.

$.055 \times 1,152 = 63.4$ B.t.u.

$\frac{63.4}{31.2}$ B.t.u. = 2.03° F. rise in temperature

Question 7. What cooling effect will be produced by injection of water spray in the gas specified in Question 1, assuming sufficient moisture is added to produce saturation at 70° F.?

Solution 7. In Question 1 it was shown that steam injection produced a heating effect. The effect of this slight heating is to drop the relative humidity at the increased temperature to slightly under 100 per cent. However, as soon as the gas returns to the mains this slight rise in temperature is lost and humidity again is 100 per cent. Injection of water spray, however, produces a cooling which requires a reduction in the addition of moisture if precipitation is to be avoided. For example, it is seen from Question 1 that for the conditions specified 1.035 pounds of water are needed to saturate 1,000 cubic feet of air at 70° F. from 10 per cent R.H.

(a) Heat vaporization water 70° F. = 1052.7 B.t.u.

If all is available for cooling 1.035 × 1052.7 = 1,090 B.t.u. $\frac{1,090 \text{ B.t.u.}}{29.50} = 37°$ F. drop in temperature (from 1e). Obviously some of the moisture added has been condensed. The method of approximation is necessary; 70° F. — 37° F. = 33° at which vapor pressure = .0912 pound per square inch.

Vapor Pressure Originally Required

The vapor pressure originally required for saturation at 70° F. was .328. Judgment would indicate that somewhere between .0912 and .3628 was the vapor pressure which combined with the cooling effect of the water would give the proper saturation that would avoid condensation at the point of water injection. For trial purposes a vapor pressure of .1780 at 50° F. is taken as a reasonable approximation. This would require an increase in vapor pressure from .036 to .1780, or .142 pound per square inch increase. However, at this point the density of saturated water vapor would be .000587 pound per cubic foot. For purposes of approximation the volume will be kept at 1,000 cubic feet. Now the weight of water to be added would be $\frac{.142}{.178} \times .000587 \times 1,000 = .468$ pound of water.

The total heat of vapor at 50° F.	= 1,082 B.t.u.
The heat of the liquid at 70° F.	= 38
Available heat energy per pound	=1,044 B.t.u.

(c) $\frac{.468 \times 1,044 - 489 \text{ B.t.u.}}{29.5 \text{ B.t.u.}} = 16.6°$ F.

(d) This first approximation indicates that 50° F. was within striking

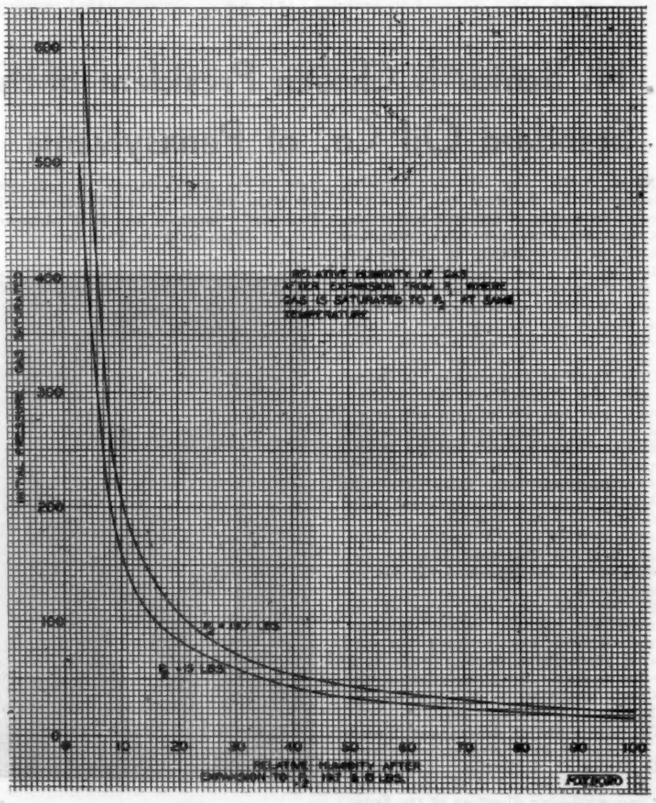


Figure 2

distance of actual conditions, since 70° — 16.6° = 53.4° F. This indicates that when the gas returns to 70° F. it will be saturated since addition of moisture at 50° F. sufficient to produce saturation at 70° F. would lead to condensation.

(e) Now if additional water is added to gas more than is required for saturation at 50° F. the temperature of the gas will rise due to heating effect of 70° water. For instance, 15 per cent extra water would give heating effect of

$$.15 \times .468 \text{ lb.} = .0687 \text{ lb.}$$

But each pound = 16.6 B.t.u. from 70° F. to 53.4° F., or calories available would be

$$.0687 \times 16.6 = 1.14 \text{ B.t.u.}$$

Heating effect would be $\frac{1.14}{29.5}$ — .039° F.

For all practical purposes the amount of cooling is proportional to the quantity of moisture to be added quite independent of temperature. The cooling effect, therefore, will be of the same characteristics as the vapor pressure curve if the gas is initially completely dry. However, such is not the case and the cooling effect might be anything.

Per Cent of Saturation

Question 8. What per cent saturation should be maintained in a gas at 70° F. to secure saturation when the gas cools to 50° F.?

Solution 8. This can best be solved by the use of Figure 3. Note the 70° at top of curves. Follow $T_1 = 70°$ curve until it intercepts the 50° T_2. Then note where their intersection lies relative to the graduation at the left showing relative humidity. The reading is 49 per cent which is R.H. to be maintained at 70° F. to secure saturation at 50° F.

Water Spray.—Much has been said about the lack of success in the use of water spray for gas saturation. From the analysis under Question 6, it is evident that this lack of success was undoubtedly due to the fact that the cooling effect produced by vaporization of water so reduced the temperature that saturation at the desired temperature was unattainable.

Two Dry Bulb Methods.—For the sake of comparison only the question of relative effects of addition of moisture and actual determination of the degree of saturation will be discussed here.

First, let us assume that the heating effect of the steam is measured by means of two dry bulbs. In Problem 2, it was shown that 2.4° F. rise in temperature occurred in increasing saturation from 10 to 100 per cent at 70° F. In Problem 5, it was shown that at 40° F. this temperature rise of roughly 1° occurred for similar change in saturation. In other words, at 70° F. each 10 per cent change in humidity gives temperature increase of about .3° F., at 40° F. this factor is .1° F. However, any supersaturation gives a rapid increase in temperature. For instance, 15 per cent excess addition at 70° F. gives a temperature increase of a rise in temperature of 5.9° F., whereas at 40° a similar excess gives 2.03° F. However, the tendency of steam injection is to raise the gas temperature so that any additional tendency toward supersaturation only accentuates risk of condensation.

In short any method dependent on any rise in gas temperature is (a) inherently insensitive until supersaturation occurs. (b) is variable dependent on the initial saturation. Due to this inherent insensitivity, any slight errors in temperature measurement immediately give serious errors in saturation.

Independent of Initial Saturation

In the wet bulb method the readings are independent of initial saturation if the system is correctly installed. By correct installation we mean (a) the wet bulb must have sufficient velocity over it to give correct wet bulb depression. (b) Both wet and dry bulbs must be in close proximity so as to avoid intermediate heating or cooling effects. (c) Both wet and dry bulbs must be exposed in the same gas at the same pressure.

(d) The wet bulb must be so installed that any moisture added by the wet bulb is measured. (e) That temperature systems are so installed that correct gas temperatures are measured sufficiently close to give readings which when interpreted into saturation will give satisfactory results.

Most of the factors enumerated are not unknown to any user of psychrometers but the factor (e) is worthy of more careful mention. Any temperature measurement is subject to errors due to radiation, convection and conduction. These errors are particularly evident in gas measurement where the fluid has a low heat value, where the pipe walls frequently are at widely different temperatures from the convection temperature of the gas and where radiation from the sun frequently arises. Care must be taken to insure that bulbs and sockets are designed to reduce these errors to reasonable values. Errors of magnitude of 5° are quite common on these measurements.

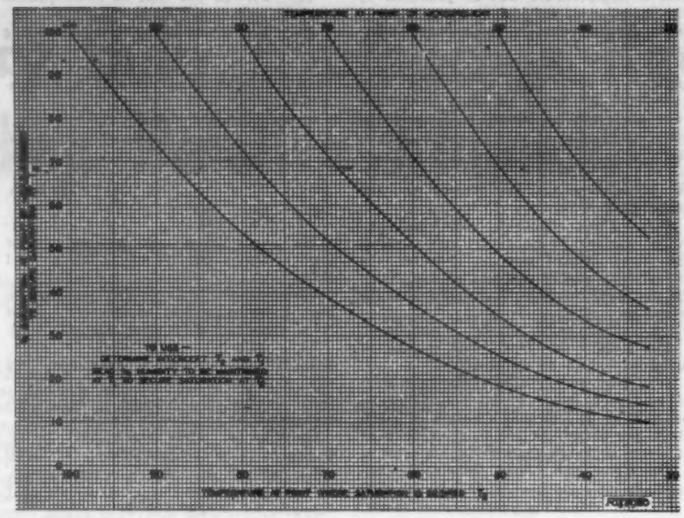


Figure 3

Now at 70° F., the wet bulb depression of 1° gives a relative humidity of 95 per cent; at 40° F. a similar depression gives a relative humidity of 92 per cent. On the average 1° F. differential gives a sensitivity of roughly 8 per cent relative humidity.

Comparison of Methods

A comparison of the two methods gives roughly:

	Wet and Dry Bulb	Heating Effect
Sensitivity in per cent humidity for 1° F. change..	8%	50%
	(average of 40° F. and 70° F. conditions)	
Effect of variations in initial humidity.....	None	Serious
Ability to determine correct humidity to secure saturation at a lower temperature.....	May be set readily	Difficult to do; practically impossible

In conclusion, analysis of the subject would indicate:

(a) Use of steam to inject moisture.

(b) Use of some positive means for measuring humidity.

TABLE 1

T = Temperature in °F.
P = Pressure in lbs. per sq. in. absolute.
V = Specific volume in cu. ft. per lb.
d = Density in lbs. per cu. ft.
h_g = Total heat of vapor at temp. B.t.u. per lb.
h_f = Total heat of liquid at temp. B.t.u. per lb.

Data from Keenan's Steam Tables

T	P	V	d	h_f	h_g
35	.1000	3,301	.000303	3.0	1,075
40	.1217	2,445	.000409	8.0	1,077
45	.1475	2,037	.000491	13.0	1,079
50	.1780	1,705	.000587	18.0	1,082
55	.2140	1,432	.000698	23.0	1,084
60	.2561	1,208	.000828	28.0	1,086
65	.3054	1,023	.000978	33.0	1,089
70	.3628	869	.001151	38.0	1,091
75	.4295	741	.001350	43.0	1,093
80	.5067	634	.001578	48.0	1,095
85	.5960	544	.001838	53.0	1,098
90	.6980	469	.002134	58.0	1,100
95	.8149	409	.002469	63.0	1,102
100	.9487	351	.002851	68.0	1,104
105	1.1009	305	.003279	73.0	1,106
110	1.2740	266	.003759	78.0	1,109

TABLE 2

Glaisher's Factors or A in the Equation $t_d = t - A(t - t_w)$

Where t = Temperature of the dew point in either °C. or °F.
t_d = Dry bulb temperature.
t_w = Wet bulb temperature.
A = Glaisher's factor.

The following are the Glaisher's values for various temperatures:

°C.	°F.	°A.
— 8	17.6	8.55
— 7	19.4	8.27
— 6	21.2	7.82
— 5	23.0	7.28
— 4	24.8	6.61
3	26.6	5.80
2	28.4	4.92
1	30.2	4.06
0	32.0	3.32
1	33.8	2.81
2	35.6	2.54
3	37.4	2.39
4	39.2	2.31
5	41.0	2.26
6	42.8	2.21
7	44.6	2.17
8	46.4	2.13
9	48.2	2.10
10	50.0	2.06
11	51.8	2.02
12	53.6	1.99
13	55.4	1.95
14	57.2	1.92
15	59.0	1.89
16	61.8	1.87
17	63.6	1.85
18	65.4	1.83
19	67.2	1.81
20	68.0	1.79
21	69.8	1.77
22	71.6	1.75
23	73.4	1.74
24	75.2	1.72
25	77.0	1.70
26	78.8	1.69
27	80.6	1.68
28	82.4	1.67
29	84.2	1.66
30	86.0	1.65
31	87.8	1.64
32	89.6	1.63
33	91.4	1.62
34	93.2	1.61
35	95.0	1.60
36	96.8	1.59
37	98.6	1.58
38	100.4	1.57
39	102.2	1.56
40	104.0	1.55

TABLE 4

Values of the Molar Heat Constant C for Various Gases Derived From Values for C_v Given in International Critical Tables

	Air	7.0
Hydrogen	H_2	6.9
Nitrogen	N_2	7.0
Carbon monoxide	CO	7.0
Carbon dioxide	CO_2	8.9
Oxygen	O_2	7.0
Methane	CH_4	8.6
Acetylene	C_2H_2	10.1
Ethylene	C_2H_4	10.2
Ethane	C_2H_6	11.5

The values given are the products of specific heat at constant pressure in calories per gram per °C. multiplied by the molecular weight of the gas in question.

TABLE 4

A

P_1 initial pressure in lbs. per sq. in. absolute	Relative humidity after expanding from P_1 to the same temperature at 19.7 lbs. per sq. in. absolute
19.7	100 %
39.4	50 %
78.9	25 %
157.6	12½ %
315.2	6¼ %
630.4	3⅛ %

B

Initial pressure lbs. per sq. in. absolute	Relative humidity after expanding from P_1 to the same temperature at 15 lbs. per sq. in. absolute
15	100 %
30	50 %
60	25 %
120	12½ %
240	6¼ %
480	3⅛ %

J. H. Senior Is Chosen President of the Standard Oil Co. of Pennsylvania

NEW YORK, Aug. 29.—J. H. Senior, director of the Standard Oil Co. (New Jersey) in charge of domestic marketing, has been elected president of the Standard Oil Co. of Pennsylvania, in conjunction with changes in the executive personnel of the Pennsylvania company incidental to the retirement on August 31 of J. A. Van Wynen, who has been directing operations of the Pennsylvania company since its organization a few years ago.

C. G. Sheffield, vice president in charge of sales for Standard Oil Co. of New Jersey, has been elected to a similar office with the Pennsylvania companies, in addition to his present duties. R. N. Keppel, formerly head of the personnel and training department at 26 Broadway and more recently acting assistant manager of the Jersey company's Newark division, returns to New York as a sales-manager of the Delaware company and a director of the Standard Oil Co. of Pennsylvania.

To facilitate the new lineup of the Pennsylvania company, several members of the old board have resigned that portion of their duties having to do with the Pennsylvania Field, including Grant McCargo, president, A. A. Lacazette, E. J. Marvin and Charles Carnes.

The new board of directors of Standard Oil Co. of Pennsylvania consists of J. H. Senior, C. G. Sheffield, R. N. Keppel, E. A. Holbien and E. G. Barber, the last two marketing directors of the Delaware company; J. Walter Saybolt, manager of the lubricating sales department for Standard Oil Co. of New Jersey (the Delaware company), and E. F. Johnson,

(Continued on Page 30)

J. H. SENIOR

New low-priced cars this year need high anti-knock gasoline

And low-priced cars burn most of the gasoline—there are more of them

Small car owners are canny buyers—no fancy prices for them

What a chance for the Dubbs refiner He can make and sell anti-knock gasoline at low cost or he can charge a premium The quality justifies it

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Extensive Study of Underground Corrosion and Its Prevention Conducted by Government

A brief summary of the activities of the underground corrosion section of the Bureau of Standards may be of some interest to those in the oil and gas industries who wish to form an idea of the present status of the study of underground corrosion and its prevention. Before consideration is given to the problems under study, certain general statements concerning the magnitude and value of the undertaking may be worth while.

A study made a short time ago by E. R. Shepard of the Bureau of Standards indicates that there are 450,800 miles of underground pipe lines used for the transportation and distribution of water, oil and gas. The value of these lines has been estimated at $5,688,600,000. A few years ago, Carl Weidner, chairman of the A.P.I. committee on corrosion of oil field equipment, estimated the annual corrosion loss on oil lines to be $100,000,000, which is roughly equivalent to a charge of 1 cent on each gallon of gasoline. Since the mileage of oil lines is but a third of the total, we may assume that the total loss is roughly three times this amount.

In addition to the direct corrosion losses, there are considerable losses of the transported fluids, time of shutdowns, and occasional serious losses resulting from the damage caused by escape of the fluids. Estimation of direct and indirect losses resulting from corrosion are, of course, only rough approximations; but whether the figures mentioned are too large or too small, they indicate a sum well worth saving.

Corrosion is a national, rather than a local problem, and it affects everyone directly or indirectly. It is, therefore, particularly adapted to co-operative study, and the Bureau of Standards has been fortunate in securing the co-operation of diverse interests in its corrosion studies. It numbers among these 44 manufacturers of pipe, 53 manufacturers of protective coatings, 84 public utilities and 6 national associations, three of which employ research associates to assist in the solution of corrosion problems.

Last year the Bureau of Standards expended about $26,000 on the study of soil corrosion problems. Eight of its staff, in addition to the research associates, are assigned to the work. Interests outside the bureau expended last year approximately $38,000 in co-operation with the bureau's soil corrosion work.

Good Investment

A research laboratory requires a long time and a large investment before it begins to demonstrate its value, but if properly planned, managed and maintained, it usually proves a good investment. Effective research men are a somewhat peculiar type and it is difficult to find men suited to undertake a given research problem. When they have been secured, it requires time for them to become familiar with the problem. Because the phenomena connected with underground corrosion are but partly understood, it has seemed advisable to begin with field studies and these, too, require much time. Since 1922, the bureau has buried about 14,000 specimens of pipe materials. Within the past three years approximately 7,500 specimens of protective coatings and 5,000 specimens of bare pipe have also been placed under observation by research associates. During 1932, approximately 5,000 additional specimens of corrosion resistant materials and nonbituminous coatings will be buried in 15 corrosive soils.

It is reasonable to inquire whether data are available which indicate the value or usefulness of the investigation. This is a legitimate question, but one which unfortunately is not susceptible to a precise answer. Although the amount cannot be readily estimated, it is probable that already substantial savings have been effected by public utilities as a result of demonstration of the limited superiority for underground use of premium priced ferrous materials. These economies should increase from year to year as the results become more definite and better appreciated. Much probably has been saved by demonstrating the causes of coating failures and the ways of avoiding these failures and by stimulating manufacturers to produce better coatings. In recent years the policy of many oil companies with respect to pipe line protection has undergone a distinct and advantageous revolution, partly because of this work and partly because of the studies of the engineers of co-operating organizations.

Underground Corrosion Projects

The activities of the underground corrosion section can best be described by means of an outline of the projects in progress or proposed for the future. The outline of research projects which follow should be considered in the light of the main objectives of the work, so that the interrelation of the various projects may be better appreciated. Because of more or less overlapping of these projects, work which is being done on any one of them may contribute materially toward the completion of another. A detailed description of the exact method of attack has not been attempted in this outline; but the procedure which it is planned to follow in the case of each project can be stated fairly definitely. Some of the projects are completed, others are well under way, and some have not been started. The successful completion of the program proposed, which it is believed to be necessary to reduce soil corrosion losses to the lowest possible figure, is dependent on many circumstances which are beyond the control of the bureau. For this reason it is impossible to state definitely how much will be done on each project within any given time. One project may be temporarily abandoned and efforts concentrated on another when outside co-operation and conditions are especially favorable at the time. In the following outline, the projects described are arranged under three mains divisions: (A) Study of soil corrosion phenomena; (B) corrosion prevention; (C) projects recommended for sponsorship by co-operating organizations.

A. Study of Soil Corrosion Phenomena

1. Corrosiveness of pipe materials.

The rates of corrosion of various types of commercial pipe materials under various soil conditions are being determined for the purpose of establishing the seriousness of soil corrosion, the distribution of corrosive soils, and the pipe material best adapted to different soil conditions. About 14,000 specimens have been buried, and of these 6,000 have been examined. Specimens are being removed at regular intervals and reports issued after inspection of each group of specimens.

Publications: Bureau of Standards Technologic Paper 368, Research Papers 95, 329, 359.

2. Relation of long line currents to corrosion.

This project was undertaken to determine whether long line currents were associated with corrosion. These currents were found to be independent of stray currents and to be indicative of local areas of corrosive soils. The causes of the currents and application of current measurements for locating hot spots have been suggested.

Publication: Research Paper 298.

3. Comparison of data obtained from the Bureau of Standards pipe specimens with field experience.

The purpose of this investigation is to determine the applicability of the bureau data to the corrosion of pipe lines. Unpublished data indicate a satisfactory correlation for several soils. It is planned to carry out further studies as soon as a favorable opportunity for field work is presented.

4. Preparation of a soil corrosion map of the United States.

This map and the accompanying text is intended to show the distribution of the soils of the United States with respect to their corrosiveness. The project was undertaken by the research associate of the Cast Iron Pipe Research Association with the co-operation of the United States Department of Agriculture. This work has been practically completed.

5. Development of methods for testing the corrosiveness of soils.

The purpose of this project is to develop methods which will enable the pipe line operator to determine where he should take precautions against corrosion. Two methods have been developed and others are under consideration.

Publications: Research Papers 298 and 363. A third paper on this subject appears in this issue of The Oil and Gas Journal.

6. Procedure for conducting soil corrosion surveys.

A procedure will be devised for applying soil maps, and laboratory and field tests to the classification of soils as to their corrosiveness. Studies in which these methods were employed have been conducted on two pipe lines. Additional studies, however, should be undertaken on other pipe lines in various parts of the country before this project can be considered completed.

Publications: Research Paper 363. A.G.A. Monthly, Volume 13, No. 2, Page 70, 1931.

7. Relation between the composition and certain metallurgical properties of various pipe materials and their resistance to corrosion.

8. Preparation of abstracts of the more important articles on underground corrosion and protective coatings.

This project has been about one-fourth completed.

B. Corrosion Prevention

1. Field examination of protective coatings.

This study was undertaken to determine the adequacy of protective coatings in service. The project is now complete. It has been shown that mechanical forces exerted by the soil largely account for the failures of protective coatings.

Publications: Proceedings of the ninth annual meeting of the American Petroleum Institute, Section 1. Proceedings of the tenth annual meeting of the American Petroleum Institute.

2. Tests of proprietary pipe line coatings.

This project of the American Gas Association was begun in 1929, and was undertaken for the purpose of comparing representative proprietary coatings under various soil conditions. The project is about one-fourth completed.

Publications: American Gas Journal, May, 1930. A.G.A. Monthly, June, 1930. A.G.A. Studies of Protective Coatings for Pipe Lines, convention report, 1931.

3. Tests of types of protective coatings.

This investigation was undertaken to determine the behavior of representative protective coatings in a variety of soils and to compare the behavior of certain of these coatings on working lines and on short nipples. This project will be one-third completed in 1932.

Publications: A.P.I. Production Bulletin 208, 1931.

4. Study of a commercial method of making soil corrosion surveys.

The purpose of this study was to determine the effectiveness of a special method for identifying the areas in which protection of a pipe line was required. Project completed.

Publication: A.G.A. Monthly, Volume 13, No. 2, 1931.

5. Identification of coating materials.

The purpose of this investigation is to determine some of the physical properties of the coating materials under test in the A.G.A. and A.P.I. projects in order that the materials tested may be fully characterized. These characteristics will enable prospective purchasers to secure materials similar to those tested. The tests of the A.G.A. materials have been completed; the tests of the A.P.I. materials have been one-half completed.

6. Procedure for examination of proposed coatings.

It is desirable to develop tests for determining important properties of protective coatings such as resistance to distortion, impermeability to moisture and tendency to sag.

7. Relation between soil properties and behavior of protective coatings.

It is planned to relate such soil properties as cohesion and shrinkage to the distorting tendency of the soil in order to determine where shielding and reinforcing are necessary. Shrinkage tests on the soils of the A.G.A. test sites have been completed. Further soil tests will be made when field tests have shown necessity for other tests.

8. Economics of pipe protection.

A practical problem of the oil and gas industry is that of the economics of pipe protection. In its relation to this problem, the significance of the Bureau of Standards data has not been fully determined. It is planned to study statistically these data and to accumulate and study related field data for the purpose of arriving at definitions and standard procedures which are fundamental to economical pipe protection. A standard method for expressing the life of unprotected pipe in relation to the corrosiveness of the soil, wall thickness of the pipe and to time of burial is not available. Further, no precise method is at present available for expressing quantitatively the prolongation of pipe life which may result from the use of protective coatings.

C. Projects Recommended for Sponsorship

Because of better field facilities, many problems can be undertaken most effectively by the manufacturing and operating companies with the co-operation of the Bureau of Standards.

1. Development of suitable electrical apparatus for locating buried pipe lines.

The Bureau of Standards has started to collect information about various devices that are now used in the industry.

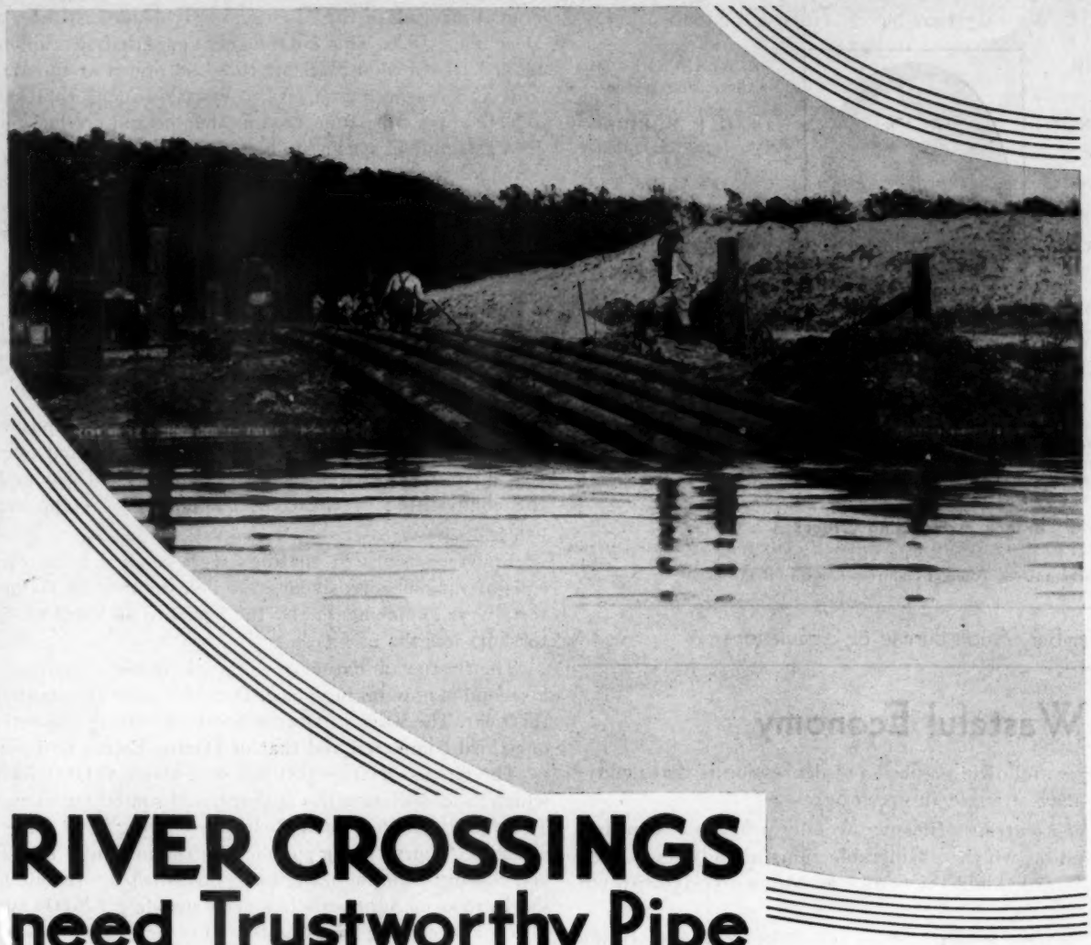
2. Code for the inspection of coatings in service.

It is desirable to devise a simple code of routine inspection of coatings for the use of field operators in order that the conditions of the coating may be reported in accordance with a standard procedure. This code may include the use of electrical and other tests.

3. Code for the inspection of newly applied coatings.

To insure the proper application of coatings in the field, it is desirable that imperfections in the coatings be located and repaired. This may possibly be accomplished by means of a suitable device.

4. Good practice for reconditioning and reclaiming pipe.



RIVER CROSSINGS need Trustworthy Pipe

For the stresses of laying and for the exposures of subsequent use, pipe lines at river crossings need great strength and durability. They must be fortified as much as possible not only against normal, continual exposure but against the occasional violent strains of storms or traffic. And the nature of their service is such that frequent repairs or replacements are not to be thought of.

It is a testimonial to the dependability of NATIONAL Pipe that it has been used in so many of the largest and most difficult river crossings in all parts of the United States. Cases will be cited and information furnished on request. In coping with special difficulties, the fullest cooperation will be given. River crossing projects is another field of usefulness where NATIONAL trustworthiness has established it as—

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DRILL PIPE
TUBING
LINE PIPE
COUPLINGS
and
REFINERY PIPING

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NATIONAL PIPE

The OIL and GAS JOURNAL

PRODUCING REFINING PIPELINE ENGINEERING MARKETING

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Wasteful Economy

One of the dangers following a period of depression is that penny-pinching economy may strangle future progress.

In the zeal for cost-cutting efficiency worthy programs requiring time for fruition and on which considerable sums already have been expended may be discarded and the money and time invested thrown away.

Slashing off the fungus growths of an unhealthy prosperity is one thing but uprooting potentially valuable seedlings is another.

There has been a lot of both going on in the indiscriminate anxiety to reduce expenses and some of the not sufficiently judicious economizers may live to regret destroying the good with the bad.

It is reported that something of this sort is under consideration in regard to possible abandonment of the co-operative study of corrosion being conducted by the Bureau of Standards in conjunction with the American Petroleum Institute, the American Gas Association, pipe line operators and manufacturers of protective coatings.

It can hardly be supposed that the oil and gas industries contemplate going back to the pioneer days when pipe was simply put underground and forgotten until its condition demanded attention.

Costly experience has taught oil and gas men that there is a lot more to it than burying pipe in the earth and scientific knowledge has disclosed conditions causing the loss of millions of dollars which cannot be ignored. It has been estimated that corrosion costs the oil industry alone over $100,000,000 a year.

Some 20 years ago Congress was aroused sufficiently to the alleged destruction of underground pipes by currents from street railway lines to make a small appropriation to cover the cost of an investigation of the matter by the Bureau of Standards.

In that investigation covering a period of 10 years cases of corrosion which could not be attributed to electrolysis suggested that certain soils might be corrosive and a study of the corrosiveness of soils was included.

Pipe manufacturers furnished the material and utility companies the labor and ground for tests of soil action in 47 localities throughout the country.

It was this example of co-operative effort between those directly interested and the government service which led to the similar arrangement between the American Petroleum Institute, the American Gas Association, the pipe lines and the manufacturers of protective coatings.

A general committee on corrosion was suggested at the seventh annual meeting of the American Petroleum Institute, held in Tulsa in December, 1926. This committee, appointed the following year, employed Dr. Gordon N. Scott to be stationed at the Bureau of Standards as a research associate to work on such problems as were to be selected by a subcommittee on pipe line and production corrosion. His first assignment was a study of protective coatings.

The American Gas Association's distribution committee also became interested and named a subcommittee on pipe coatings and corrosion which employed Dr. S. P. Ewing to pursue that subject likewise as a research associate at the Bureau of Standards.

Arrangements were made by Doctor Ewing with coating manufacturers and members of the American Gas Association for the application of 42 kinds of protective coatings to short lengths of pipe and their burial in 14 different soils. These specimens were to be examined at four periods, the first nine months after burial.

Doctor Scott examined about 5,000 coating exposures on working oil lines but later it was decided to test a limited number of typical coatings on working lines which would yield a complete history of the composition of the coatings, methods of application and their performance.

Fourteen types of coatings were applied to working lines in 16 soils of various corrosiveness, to be examined on six occasions. These tests were supplemented by the burial of 46 kinds of coatings applied to short lengths of pipe.

The first examination of the working lines was made last year and a second is now taking place. Doctor Ewing also examined specimens this year. The work of Doctor Scott on coating inspection is therefore one-third completed and that of Doctor Ewing half completed.

The gas association test has cost about $44,000, including 1932, of which the association has appropriated something more than one-half. The American Petroleum Institute coating tests have cost $132,000, about one-fourth being supplied by the institute. Pipe line companies and coating manufacturers have furnished the remainder. In addition the Bureau of Standards has been spending $26,000 annually on corrosion and coating investigations but next year this will be reduced 20 per cent by the new budget.

These are comparatively trivial sums in contrast to a loss from corrosion to the oil industry alone of over $100,000,000 a year.

Time is the essence of such tests. They cannot be hurried. What they disclose may call for further study and experiment if a remedy is to be discovered.

The data so far obtained are suggestive though not conclusive but it is stated there are good reasons for believing that the tests as planned will furnish the results originally expected and, if the work is completed, it should produce definite information as to the usefulness of the coatings tested and methods for identifying and specifying coatings, together with the fundamental principles of pipe line protection.

Even from the hardest viewpoint of economy and the direst need for reducing expenses it is difficult to figure the few additional thousands required to complete the work under way against the hundred millions destroyed each year by corrosion that can be curbed.

There is the further factor that interruption of the work and the discharge of the research associates who have specialized on this investigation will mean the almost total loss of the $176,000 that has been invested.

There is also the question whether the co-operating associations have not morally obligated themselves to carry it to a conclusion in fairness to the other participants who have contributed two-thirds of the expenses to date.

Abandonment at this time, without making the test complete, would moreover raise the question why it was started at all, a reflection that cannot sit lightly on anyone concerned.

The depression is passing but corrosion is here to stay unless something is done about it.

Laid in the very teeth of America's roughest topography, thousands and thousands of miles of Dresser Coupled gas lines have gone in to *stay*. Flexible. Tight. Permanent.

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COUPLINGS *Dominate!*

Advance in Several Grades of Oklahoma Fuels With No Important Changes in Gasoline

By C. O. WILLSON

The same price trends which have been apparent in the Oklahoma (Group 3) refinery market since late July continued over the past week. All products used as fuels are strong with additional advances in some grades during the week. At the same time weakness was apparent in all types of gasolines and refiners and natural gasoline manufacturers in several cases were having difficulty in maintaining the prices of a week ago.

More actual sales in fuels ranging from the low gravity industrial grades to the high gravity distillates were reported during the week. Prices have advanced to the point where several refiners, formerly out of the market, are selling limited quantities to buyers. However, the inquiries from buyers exceed the material offered both for immediate delivery and shipment over the balance of the year and sellers continue to dominate this division of the refinery market. In this connection there have been several inquiries for large quantities of industrial fuels in the Mid-Continent market for delivery over the next several months. Market observers believe that these inquiries point to a resumption of operations on the part of industrial concerns who in normal times are consistent buyers of petroleum fuel. These inquiries so far as known have not developed into actual orders with refiners but the optimistic believe they are forerunners of improved buying for the fall and winter months which will assure continued price recovery in all grades of fuels. It is known that those making the inquiries for industrial fuels have been surprised by the limited quantity of fuel offered them, many plant operators stating that their present contracts with the railroads and other users will take all the fuel they will have available over the balance of the year.

On the bullish side of the fuel market it is also pointed out that general improvement in business conditions will not only stimulate the industrial demand but will also increase the railroad takings. Most of the carriers have been taking the minimum quantities of fuel oil provided for in their contracts with refiners and in a few cases at least, they are behind in these shipments. Should there be a large increase in car loadings among the southwestern carriers, several of the refiners would have to purchase fuel from other refiners to cover their requirements.

Refined Market Barometer

Scattered reductions in refinery tank car prices on gasoline reflected additional weakness in this product during the past week. Reports show that these price reductions in some cases were made by refiners who wished to liquidate inventories before the close of the main consuming season. Uncertainty regarding the tank wagon and retail gasoline markets also was a factor in the refinery tank car market. Price changes in natural gasolines were of minor importance. The situation in kerosenes was mixed, some areas reporting a stronger market while in other sections prices have been reduced. Furnace oils were active and prices generally firm or advancing. Better domestic demand for fuel oils at inland points. No important changes reported in lubricating oils and wax.

Mid-Continent—Continued improvement in demand for heavy fuels, furnace oil, gas oil and tractor fuels and prices higher on several grades. Kerosene steady. Motor fuels and natural gasolines unsettled and prices reduced fractionally on some grades. Lubricating oil and wax prices unchanged.

East Coast—Major refiners continue tank car quotations on gasoline unchanged with weak undertone in motor fuel market. Kerosene more active. Routine movement of lubricants. Good demand for heating oils. Bunker oil steady. More domestic inquiries for wax.

Pennsylvania—Prices lower on bright stocks and neutral oils. Kerosene quotations reduced and some grades of gasoline lower in price. Wax unchanged.

Gulf Coast—Gasoline prices unchanged. Pale and red neutral demand slow. Kerosene firm. Occasional sale of fuel oil and gas oil under general market.

Chicago—Unsettled retail situation in gasoline market reflected in tank car market. Demand for all grades of fuels continues to improve. Kerosene steady.

California—Refinery gasoline prices lower. Fuels steady. No change in lubricants.

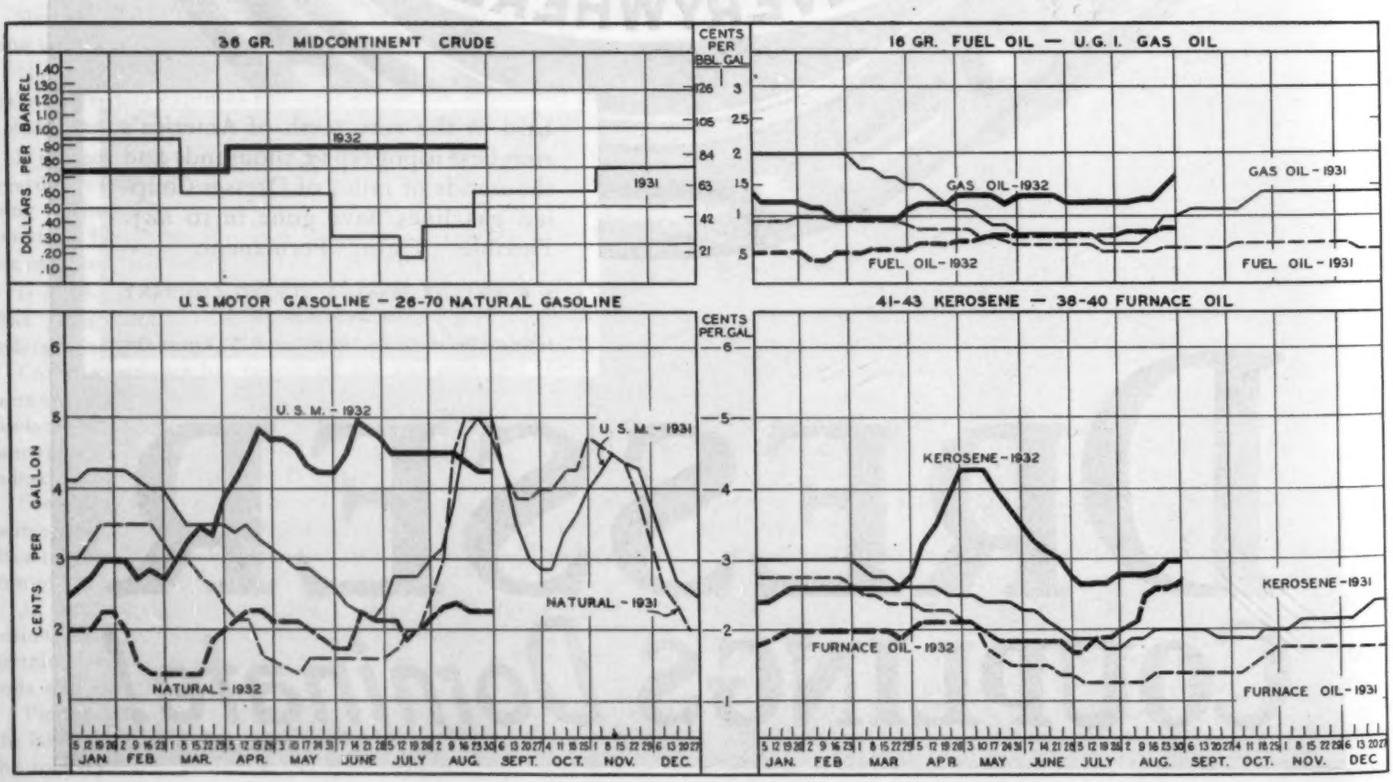
Gasoline Market Unsettled

The strong market on all petroleum fuels obviously cannot offset the weakness in gasolines which are the principal plant products for practically all Mid-Continent refiners and some pessimism is apparent among the refiners as to the outlook for the remainder of the year. Spot gasoline prices have declined to the point where the margin of profit, if any, is exceedingly small for the average plant operator despite the better prices obtained for fuels. Predictions are made that the weakness in gasolines extending from the tank car to the retail markets will result in lower crude oil price schedules unless conditions are improved in the near future.

The action of the Standard Oil Co. (Indiana) explained in these columns last week, in providing for rebates to buyers of 100 or more gallons of gasoline monthly, is causing wide discussion. So far few competing companies have announced their intention of adopting the Standard plan. As predicted, several distributors including large station operators are modifying the Standard discount so that the rebates of 2 cents in the regular and premium grades and 1 cent on the third grade will apply to consumers whose monthly purchases are as low as 25 gallons a month. The Standard discount applies only to the larger users of gasoline, most of which come under the classification of commercial accounts.

Giving the rebate to consumers buy-

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



ing 25 or more gallons monthly, if this practice is generally adopted, would in effect be the same as a 2-cent reduction in posted schedules so far as station revenue is concerned and it is predicted that such a reduction in retail schedules will shortly develop unless some plan of open discounts can be worked out which will be generally satisfactory to distributors. Any reduction in retail schedules will be of direct concern to Oklahoma and other Mid-Continent refiners most of whom have contracts with jobbers based on service station schedules.

Less Bootleg Crude

Several buyers and sellers in the Mid-Continent trade, the past week, have pointed to the decrease in offerings of crude oil under the posted schedules, as a favorable development which will be reflected in refined markets if continued. For several months the Mid-Continent market has been disturbed by offers of crude oil from 25 to 50 cents per barrel under the posted schedules. This oil presumably was oil produced in violation of proration orders in the Oklahoma and East Texas fields.

Because of the doubtful legal and ethical standing of transactions involving sales and purchases of this crude oil, it has been difficult to determine the quantity of oil actually involved. In certain cases, several brokers were endeavoring to dispose of the same oil resulting in the trade obtaining an erroneous conception as to the number of barrels available.

In addition to the oil being offered openly under the posted schedules, it has also been charged that certain companies were producing oil in violation of proration agreements and running the oil to their refineries along with the oil which they legally were entitled to produce. Operations of this kind are even more elusive than those involving open market sales.

These so-called "leaks" in the proration plan of producing oil which aims to keep output in line with the demand with all refiners on the same basis so far as the cost of crude oil at the wells is concerned, unquestionably has been a contributing factor to the weakness in the refinery tank car markets on gasoline in the Mid-Continent and Middle West. Refineries paying from 50 to 75 cents per barrel for crude oil at the wells obviously can sell gasoline cheaper than those paying the posted price, varying from 90 cents to $1 per barrel. The companies who refine their own crudes also have an important advantage when they produce in excess of the proration allowables.

State officials in Texas and Oklahoma over the past two weeks have taken official action against some of the companies and operators alleged to be violating the proration orders. It has been reflected in the crude oil supplies of a few refiners and it has also been noted that there are fewer reports of spot crude being available under the posted schedules. Those in a position to know state that a strict enforcement of the proration orders in Texas and Oklahoma will eliminate additional weak spots in the refinery market and prove of benefit not only to the gasoline prices but all the other light end products.

Gasoline and Naphtha

Last week, Oklahoma sellers reported competition on resale U. S. Motor of low octane as low as 3⅞ cents basis Group 3. This material was absorbed and the first of this the low of the Oklahoma market was 4 cents for resale and 4¼ cents to the trade.

Spot trading was not heavy although several of the larger refiners reported excellent movement on contracts. The week end will bring a Labor Day holiday and some of the jobber buying has been in expectation of heavy consumption from Saturday through Monday.

Buyers of 400, 390 and 375 endpoint material report a tightening in those grades and they are relatively stronger than the U. S. Motor material. There has been so little demand for the high gravity and low endpoint grades that very few refiners are making those cuts at their plants. So long as only car lot orders are available they will continue in that policy. Some 400 endpoint material was sold at a low of 4⅜ cents with the low on 390 4⅝ cents and 375 endpoint 4¾ cents. Small sales of 360 endpoint were reported at 4⅞ cents with quotations as high as 5¼ cents.

Naphthas continue in good demand from blenders with prices unchanged.

Natural Gasoline

Natural gasoline prices are being maintained by manufacturers although spot trading in practically all grades has been dull. Grade 26-70 continues to be sold at 2¼ cents both in Oklahoma and Texas. In Oklahoma the 18-55 grade is bringing 2¾ cents. In the low vapor pressure grades 15-pound material was the most active at 3 cents.

Kerosene and Furnace Oils

Prime white distillates and the 41-43 water white kerosene brought the same price of 3 cents in several sales of the past week. In some cases sellers have shipped untreated kerosene on their prime white distillate orders. Prices on low flash furnace oils range down to 2⅝ cents with many inquiries for all grades. Several of the larger refiners are now quoting a low of 3¼ cents for their 41-43 water white kerosene and 3½ cents for their 42-44 grade.

Fuel Oil and Gas Oil

As previously explained the commercial grades of fuel oil are strong. The only "bargain" material are grades of high sulphur and high viscosity or those containing fixed carbon so that they are not satisfactory fuels to a majority of the industrial fuels. U. S. Motor oil has advanced to a low of 1⅝ cents.

Lubricants

The 2-cent reduction in bright stocks announced last week by Oklahoma manufacturers has not stopped all the complaints of price cutting. Neutral oil and wax movement is confined to routine orders.

Revenue Bureau Answers Questions on the Application of New Excise Tax

WASHINGTON, D. C., Aug. 29.—Cutting oils and water soluble oils are taxed under Section 601 (c) (1) of the Revenue Act of 1932.

On this subject an informal ruling has been made as follows:

"In reply you are advised that the question as to whether cutting oils and water soluble oils are lubricating oils and used for lubricating purposes, was submitted to the Bureau of Standards, Department of Commerce, for a ruling. According to an opinion of that bureau, cutting oils, including water soluble oils for use in cutting and machining operations on metals, are used, in part at least for lubricating purposes.

"Under Treasury Decision 4,339, issued July 16, 1932, any oil having both lubricating and nonlubricating uses is taxable when sold or used for lubrication. Therefore, since cutting oils and water soluble oils have both lubricating and nonlubricating uses, they are taxable under the above section of the act as lubricating oil when sold by the manufacturer or producer thereof."

The National Petroleum Association, which has submitted several questions to the Revenue Department, points out in a bulletin this week that refiners are not entitled to purchase lubricating oil tax free where they intend to resell this oil. This is true even in cases where they are registered as manufacturers under Treasury Decision 4,339.

The association has received the following answers to other questions submitted to the department:

"'First question: A broker whose business is purchasing and selling oils buys oil from a manufacturer, pays for it and reinvoices to an exporter. Is the manufacturer responsible for the tax?'

"Answer: The question of the taxability of sales of articles by the manufacturer thereof for export which are in due course so exported, is now under consideration in the bureau and as soon as a final conclusion is reached you will be advised.

"'Second question: Is a broker that has storage facilities for storing oil classed any differently than a broker who does nothing but purchase and sell oils?'

"Answer: A broker who has storage facilities for storing oil is not classed any differently than a broker who does nothing but purchase and sell oil.

"'Third question: A broker buys oils from a manufacturer under a contract prior to May 1, putting the oil into his own storage. Under a similar contract with another manufacturer, he sells the oil and the manufacturer purchasing the oil refuses to pay the tax. These two contracts are based on a price that does not include the tax. Is the original manufacturer selling the oil responsible for the payment of the tax?'

"Answer: In this instance the person who is liable for the payment of the tax is determined by the provisions of the contract. If the contract does not permit the addition of the tax to the contract price and does not provide that the vendor shall pay the tax, the tax is payable by the vendee to the vendor at the time of sale and shall be returned and paid to the collector by the vendor.

"'Fourth question: Provided the original manufacturer, on account of contract dated prior to May 1, can receive exemption from the payment of tax, making the broker responsible, can the broker, also with a contract dated prior to May 1, in turn receive exemption making the purchasing manufacturer responsible for the tax?'

"Answer: A broker who is liable for

(Continued on Next Page)

American Petroleum Institute Weekly Refinery Statistics

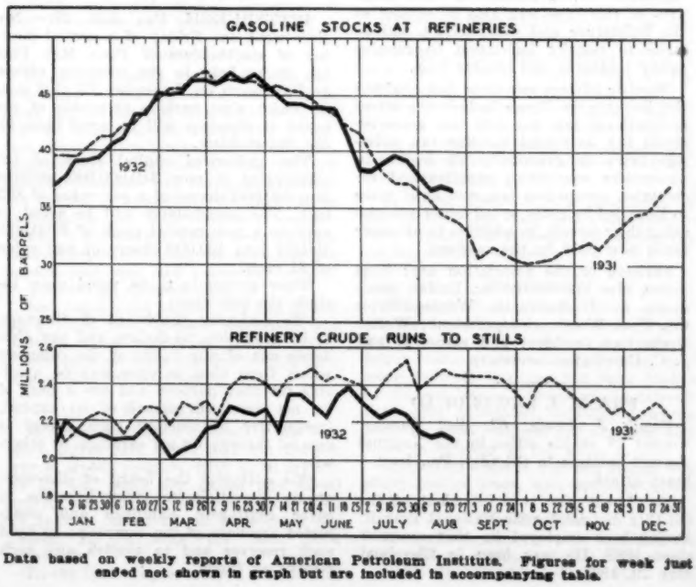
Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Gasoline stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

Week Ending August 27, 1932, Compared to Week Ago

	Week ending August 27				Week ending August 20			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	443,900	6,153,000	9,043,000	100.0	472,900	6,232,000	8,507,000
Appalachian	91.8	89,600	1,329,000	1,011,000	91.8	86,600	1,417,000	1,014,000
Ind., Ill., Ky.	98.9	277,000	4,722,000	4,358,000	90.9	284,400	4,972,000	4,349,000
Okla., Kans., Mo.	89.6	230,900	3,209,000	3,483,000	89.6	223,100	3,342,000	3,366,000
Tex. Gulf	99.8	362,400	4,295,000	9,767,000	99.8	346,300	4,083,000	9,018,000
La. Gulf	100.0	96,300	97,000	4,242,000	100.0	93,100	1,405,000	4,626,000
Inland Texas	76.5	95,100	1,191,000	2,120,000	76.5	101,900	1,172,000	2,316,000
N. La. and Ark.	97.0	42,400	1,471,000	627,000	97.0	41,600	96,000	640,000
Rocky Mtn.	89.4	45,400	1,747,000	537,000	89.4	49,100	1,787,000	576,000
California	96.7	421,100	12,450,000	99,737,000	96.7	424,300	12,645,000	99,688,000
Total U. S.	95.1	2,104,100	36,664,000	134,925,000	95.1	2,128,300	37,051,000	134,100,000

Week Ending August 27, 1932, Compared to Year Ago

	Week ending August 27				Week ending August 29, 1931			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	443,900	6,153,000	9,043,000	100.0	457,600	4,860,000	10,803,000
Appalachian	91.8	89,600	1,329,000	1,011,000	91.8	100,400	1,180,000	1,448,000
Ind., Ill., Ky.	98.9	277,000	4,722,000	4,358,000	98.9	335,400	4,715,000	4,429,000
Okla., Kans., Mo.	89.6	230,900	3,209,000	3,483,000	89.6	290,400	2,448,000	5,192,000
Tex. Gulf	99.8	362,400	4,295,000	9,767,000	91.8	396,700	4,909,000	8,141,000
La. Gulf	100.0	96,300	97,000	4,242,000	100.0	127,600	685,000	2,033,000
Inland Texas	76.5	95,100	1,191,000	2,120,000	....	142,500	1,219,000	2,411,000
La. and Ark.	97.0	42,400	1,471,000	627,000	....	62,700	131,000	1,041,000
Rocky Mtn.	89.4	45,400	1,747,000	537,000	89.3	53,300	1,289,000	817,000
California	96.7	421,100	12,450,000	99,737,000	96.5	486,400	11,779,000	97,570,000
Total U. S.	95.1	2,104,100	36,664,000	134,925,000	95.0	2,453,000	33,215,000	134,885,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table.

Cicero Murray Charges Three Companies With Unlawful Production

OKLAHOMA CITY, Aug. 27.—Three companies, owning nine wells in the Oklahoma City Field, were charged with illegal production of 675,000 bbls. of oil during the first seven months of this year, in complaints filed with the State Corporation Commission today. Hearing was set for September 14, but Lieut. Col. Cicero I. Murray, in charge of military proration enforcement, told the commission that he already had shut down the properties and that no oil was being produced. This brings the total number of wells shut down for illegal production to 25, all of them having closed within the last three months, during which time the militia has unearthed a number of secret connections.

Five wells are named in the complaint against the Blackwell Oil & Gas Co. It is charged that during the period from first of the present year to end of July, the company illegally produced in excess of 150,000 bbls. of oil.

In the complaint against the Russell Petroleum Co., two wells are named. It is alleged the company produced and transported approximately 400,000 bbls. of oil, and that incorrect reports or no reports were made on the production.

Ed S. Holman, Inc., is charged with 125,000 bbls. of illegally produced oil on one lease, also known as the Mid-Texas Petroleum property, but under operation of Holman. Failure to make correct reports on production to the umpire, also is charged.

Texas Truck Owners Will Combat Excessive Taxes

Faced with rapidly accumulating proposals to increase motor truck taxes and restrictive regulations, truck owners of all classes in Texas have united with dealers in automotive equipment, accessories and supplies to form the Texas Motor Transportation Association with headquarters in Austin. The new organization supersedes the Texas Truck Owners Service Bureau, an organization composed largely of operators for hire and large fleet owners, and includes within its membership all owners of trucks, regardless of weight, size, or scope of operation.

An active legislative program to repeal or modify existing statutes that are designed for the protection or benefit of competing forms of transportation rather than for the benefit of the public and which destroy or hamper the fullest usefulness of motor transportation will be carried on by the association. Vigorous opposition to the passage of other measures of this type will also be offered at the legislature and every effort will be made to restrict legislation to genuine safety measures and similar bills.

Specific adverse measures that confront the industry in Texas include the wheel tax, mileage tax, ton-mile tax, gross receipts tax, increased gasoline tax, privilege taxes on practically all dealers in automotive equipment, supplies and accessories, occupation tax, and local taxes to be levied by cities on all motor vehicles using their streets, in addition to all other taxes now paid by the carriers.

Officers of the association are: Tom Jones, pipe line contractor, Dallas, president; A. J. Scrivener, Waples-Platter Co., Fort Worth, vice president; Walter Beck, vice president and manager, and J. C. Carrington, secretary.

FRANK J. LEWIS DEAD

Frank J. Lewis, 65, died Sunday, August 21, in his office in the National Transit building in Oil City, Pa., from a heart attack.

Mr. Lewis was superintendent of the Oil City district for the National Transit, having been employed by that company since 1888. He was born in Cleveland May 29, 1867.

Texas Commission Absolves the Shell Petroleum Corp.

Relative to the press reports under date of August 20, that an injunction against the Shell Petroleum Corp. was granted on August 19 in the District Court at Austin, Tex., R. D. Parker, chief supervisor, Oil and Gas Division of the Texas Railroad Commission, released the following notice to the press on August 25:

"Due to facts disclosed by the oil and gas division of the Railroad Commission today and yesterday, and hearing of Shell Petroleum Corp. representatives, the attorney general's department was requested to dismiss suit for injunction against Shell Petroleum Corp. for alleged violation of the Railroad Commission's orders in the East Texas Field.

"The Commission today received reports from the investigator who made the original report, which indicated that there was evidently no intention to violate the commission's order, that the evidence did not support the suit, and that the Shell Petroleum Corp. has always supported and obeyed the orders of the commission.

"In fairness to the corporation's good reputation, it was regarded as fair and right that the suit be dismissed."

New Gas Conservation Law Before Texas Legislature

AUSTIN, Tex., Aug. 29.—A new natural gas conservation code will be offered in the special session of the legislature and it is regarded as certain the subject will be submitted by Gov. Ross S. Sterling for enactment.

The measures will be designed to remedy defects on which the gas common purchaser law has been declared void. The statutes will seek to establish a market outlet for the gas of independent producers and to prevent the alternative of shutting down the fields or allowing independents' gas to be drained by the exporting pipe line companies while the independents are without a means of reaching the market. Some system of ratable taking of gas from all wells will be the basis of the proposed legislation.

Two bills to accomplish this end likely will be considered by the oil, gas and mining committee of which Rep. Bailey W. Hardy, Breckenridge, is chairman.

The railroad commission and attorney general's department recently have been studying the points on which the former natural gas law was stricken down by Federal court, and the scope of valid statutes that may be adopted to replace the former law and assure the conservation and avoidance of waste in the natural gas areas.

Penn Mex Stockholders to Act Upon Proposals

PITTSBURGH, Pa., Aug. 29.—Notices went out Friday of a special meeting of stockholders of Penn Mex Fuel Co. to be held in the company offices at Pittsburgh on September 12 at 2 p.m. at which time various proposals of the board of directors will be acted upon by the shareholders.

The authorized capital stock of the corporation is now $10,000,000, divided into 400,000 shares of a par value of $25 each. The stockholders will be asked to approve a new capital stock of $400,000, divided into 400,000 shares of par value of $1 each.

Other proposals to be voted upon include the following:

"To authorize the board of directors, at its discretion, to declare and pay dividends out of any funds of the company which from time to time may be available for that purpose and are a part of its net assets in excess of its capital, irrespective of whether such excess is created through its net earnings, or otherwise.

"To authorize the board of directors, at its discretion, to create reserves to cover contingent liabilities and unadjusted accounts of the company; to fund such reserves and to abolish any such reserve or funds."

Allegany and Bradford Runs Further Curtailed

BRADFORD, Pa., Aug. 26.—The South Penn Oil Co. and the Tide Water Pipe Co., the largest buyers of crude oil in the Allegany and Bradford Fields in southwestern New York and northwestern Pennsylvania, have served notice on producers in those fields that during September they will purchase only 75 per cent of the base amount stipulated in their contracts with producers. The South Penn had already notified producers in the southern end of the Pennsylvania Grade oil fields that it would buy on a 70 per cent basis in the southern field.

The need for crude buyers to further reduce their crude purchases is no doubt due to the continued addition to crude stocks as was completely outlined by T. P. Thompson, Jr., in his address Wednesday to the directors of Bradford district Pennsylvania Oil Producers Association. While there was a continued slight draft on stocks monthly this year until the middle of May there has been an addition to crude stocks since that time and the favorable statistical position attained by Pennsylvania Grade has been practically offset by the performance of the past three months.

While all the Pennsylvania Grade oil fields have been on a curtailed basis for over a year and a half, the Allegany and Bradford Fields have had to suffer the deepest cuts, because they are the largest producers and the only pools in the four states that can appreciably increase their production by intensive drilling. In April, 1931, the Allegany Field was producing an average of 9,861 bbls. per day and the Bradford Field 33,721 bbls. per day. The Allegany Field could have been buildt up to 10,000 bbls. and the Bradford Field to 40,000 bbls. with the more extensive application of five-spot drilling and flooding, but as they threatened the market structure the producers there agreed to curtail to demand. In the week ending August 13 the Allegany Field was producing 7,300 bbls. and the Bradford Field 26,800 bbls. per day, and the remarkable part of it is that in neither field has there been much drilling in the past 16 months. About 60,000 bbls. of Pennsylvania Grade crude oil is produced daily, while in April, 1931, about 80,000 bbls. per day was produced, the present output representing a 40 per cent voluntary curtailment on the part of producers.

U. S. Revenue Department Explains Excise Taxes

(Continued from Preceding Page)

the payment of a tax (as above) may not in turn receive exemption, thereby making the purchasing manufacturer responsible for the tax, however, there is no provision in the act which prohibits a taxpayer from passing the tax on to his purchaser. The question is one between such taxpayer and purchaser over which the bureau has no jurisdiction.

"'Fifth question: Can a broker, distributor or dealer in oils, purchasing from a manufacturer and making sales to state departments, purchase oil tax free from the manufacturer?'

"Answer: A broker, distributor or dealer in oils, purchasing from a manufacturer and making sales to state departments, may not make his purchases from the manufacturer tax free.

"'Sixth question: Can a broker, distributor or dealer be appointed the sales agent of the manufacturer in the case of selling to other manufacturers, exporters or state departments and make purchases and obtain title from the manufacturer tax free?'

"Answer: A broker, distributor or dealer, appointed the sales agent of the manufacturer in case of sales to other manufacturers, exporters or state departments, but who obtains title in the articles transferred, may not make purchases tax free from the original manufacturer.

"'Seventh question: Will sales in reference to the 4-cent tax on lubricating oil and the 1-cent tax on gasoline, regarding the above questions, be the same?'

"Answer: The answers to the questions will be the same with respect to the 4-cent tax on lubricating oil and the 1-cent tax on gasoline. However, in the case of gasoline, if the dealer or distributor mentioned above is a producer of gasoline within the meaning of the Revenue Act of 1932, then he may purchase gasoline tax free by virtue of Section 617 (a) of the act."

Standard Groups' Dividends $43,868,468 Third Quarter

Cash dividend payments by companies of the Standard Oil group for the third quarter of 1932 are estimated at $43,868,468, compared with $46,308,873 in the second quarter and $51,263,688 in the third quarter of 1931, according to the regular computation made by Carl H. Pforzheimer & Co. For the first three quarters of 1932 disbursements will aggregate $136,978,394 against $172,208,952 in the corresponding period of the preceding year.

In the third quarter of 1932 regular quarterly payments were made by the larger Standard Oil units. Ohio Oil Co. declared a second dividend of 20 cents a share on the common, thus placing the stock on an 80-cent annual basis. The reduction in aggregate disbursements are accounted for mainly by reduced declarations on Standard Oil of Ohio common stock and several of the pipe line company issues. Two of the smaller companies have not yet taken action on their third quarter dividends, but regular disbursements are calculated in the computation for the period.

Among the pipe lines, Buckeye, Southern and National Transit cut their payments in the third quarter, this action being attributed in part to the transportation on oil which went into effect recently, as well as to reduce oil deliveries.

Dividends disbursement by quarters:

	First quarter	Second quarter	Third quarter
1932	$46,861,053	$46,308,873	$43,868,468
1931	63,101,797	57,843,467	51,263,688
1930	66,687,168	68,555,901	68,271,015
1929	63,101,701	66,053,389	65,426,981
1928	48,927,670	57,694,206	50,068,102

	Fourth quarter	Full year
1931	$48,530,220	$220,739,182
1930	83,012,644	286,526,728
1929	75,063,856	269,645,927
1928	62,050,357	218,740,335
1927	55,724,472	213,617,940

MAY MERGE AFFILIATES

NEW YORK, Aug. 29.—New Bradford Oil Co., controlling Mountain & Gulf Oil Co. and other producing companies operating in the Rocky Mountain area, is considering a plan for consolidation of these subsidiaries and affiliates into one company to reduce operating and administrative expenses, it is learned here. Eastern stockholders are receiving "notification" from Gilmore & Co., Los Angeles, Calif., brokers, of the pending dissolution of Mountain & Gulf Oil Co., together with an offer of 20 cents per share for their holdings. Inquiry at the oil company's headquarters in Denver, Colo., however, indicates that no decision for dissolution has yet been reached.

FORM ENGINEERING COMPANY

W. W. Sheldon, San Antonio, Tex., has been engaged for some time in the organization of the Associated Industrial Engineers and the Associated Petroleum Engineering Co. These companies will have their headquarters in the Milam Building in San Antonio, Tex., with district offices in all active oil fields in this country. The men who will make up these organizations are all technically trained in geology, petroleum engineering, accounting and law. The organizations will not own or acquire royalty or interests in drilling blocks but will act as counselors only for those desiring this type of service.

F. P. LAWTON DEAD

Frederic P. Lawton, 75 years old, for many years an oil producer in the Bradford Field, died at his home in Bradford, Pa., on Friday, August 26. Mr. Lawton went to Sawyer City in the Bradford Field in 1882 and was an active oil operator up to his last illness.

Tank Wagon Advance and Smaller Stocks Bolster Refinery Gasoline Market on East Coast

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Aug. 29.—While an unsettled undertone continues to rule in refinery gasoline markets in the East Coast area, the advance of 1½ cents per gallon in tank wagon and service station prices in the metropolitan area during the week, coupled with a further decline in total motor fuel holdings in this area, tended to bolster the market position somewhat, and the expected downward revisions in posted price schedules failed to materialize. Price shading is still reported in the spot market, however, and it is believed that only further substantial improvement in the statistical position of gasoline in this territory can head off a general lowering of prices. Volume held up well throughout the week, although distributors were naturally limiting their purchases to immediate requirements.

Aside from gasoline, there was a fairly firm undertone in other divisions of the products market. Kerosene was moving in better volume, and heating oil gallonage was also on the increase. Fuel oil and Diesel oil contract deliveries were well maintained, but irregularity continued to characterize lub oil markets, with prices unsettled and the market rather inclined to softness.

The export outlook was further confused by the announcement that the American-European oil group did not plan any further conferences with representatives of the Soviet exporting oil syndicate looking to a stabilization of world oil shipments and prices. Failure of the international group to arrive at an accord with Russia, therefore, leaves the export market in disturbed condition, although it is considered possible that the agreement reached by the international group with Rumanian producers may have some beneficial effect upon the European price basis in the near future.

Hydrogenation

The outstanding topic in market conversation in the eastern trade is still dealing with the possible effects of hydrogenation on the general market situation.

To say that the developments in hydrogenation already achieved are far beyond what the trade had looked for at this time is putting it mildly, and there is speculation in trade circles as to how further developments will affect crude demand, products prices, and general specifications of motor fuels and lubs.

While there are only two large hydro plants now in operation in the United States, some of the leading independent companies are in position to erect hydrogenation units, under license, and it is believed that the next important construction campaign in the refinery division of the industry will be in the direction of establishing of hydrogenation units by some of these companies.

Refinery Gasoline

While there have been no changes in posted prices for gasoline for refinery shipment at principal East Coast centers, the undertone remains rather erratic. The advances in tank wagon prices in New York and Boston during the week reacted in constructive fashion on market sentiment, but declining motor fuel markets in other parts of the country, coupled with the near approach of the end of the season of heaviest consumption, largely offsets the effects of the higher retail prices.

Small sellers locally were reported shading posted prices by a half to three-quarters of a cent per gallon during the week, but leading sellers were still holding to their "official" prices in most instances, and it was indicated that rather than meet the competition of the price cutters in isolated instances, major refiners would hold to posted levels until price competition reaches the point where a general downward revision in posted schedules is made necessary.

Refiners were cheered with the improved statistical position of the market, as reflected by a drop of 623,000 bbls. in visible supplies for the East Coast area during the week ended August 20. This drop, however, was due entirely to a reduction of 673,000 bbls. in motor fuel in transit for this area, stocks at refineries and bulk terminals registering slight increases for the period.

Independent distributors are watching the market closely, and are limiting their spot purchases as much as possible, in anticipation of a possible lowering of posted price schedules. With the Labor Day week-end looming ahead, however, jobbers find it necessary to keep their storage rather full, and the general expectation now appears to be that present posted prices will be maintained at least until after the coming holiday period.

The softening of the market undertone has tended to slacken interest in California and Gulf Coast gasolines for shipment into this area, and the only movement currently reported is for intercompany account, or deliveries on regular term contracts. The trade is awaiting with interest the arrival of a cargo of Trinidad gasoline, variously estimated at 50,000 to 75,000 bbls., which is due in at Bayway shortly. This will be the first cargo of foreign gasoline received in this territory for the account of a local independent marketer for some time past. It is not expected, however, that distribution of this cargo will adversely affect the wholesale market in this area, in as much as the receiver has a well-organized distributing system which is expected to absorb the Trinidad gasoline readily.

While eastern refiners have handled "third grade" gasolines during the current season, the total gallonage of this motor fuel in most sections of the territory has been gratifyingly small. On the other hand, the improved quality of the "regular" grades of motor fuel now being made by eastern refiners has tended to cut into gallonage on premium grades.

Tank Wagon Gasoline

After going through the greater part of the summer motoring season with prices abnormally low, leading marketers operating in metropolitan New York last week advanced their tank wagon and service station prices 1½ cents per gallon, making a flat retail price of 15 cents per gallon, including the state tax of 3 cents per gallon. Standard Oil Co. of New York initiated the upward movement, which was followed by other major marketers, but the increase was by no means uniform, and in some sections of the city motor fuel is still being sold at less than posted prices by stations handling the brands of the major companies. The average price of the stations still shading the market appears to be 7 gallons for $1, including taxes, although 8 for $1 is still reported from some sections. Gallonage has been holding up well in the metropolitan area, and marketers are preparing to handle a heavy volume over the coming Labor Day week-end holidays.

The Boston market, which likewise has been a hotbed of competition this season, was advanced 1 cent per gallon in both tank wagon and service station prices, effective August 24, and scattering revisions were made in other parts of the New England territory, ranging from reductions up to 1 cent per gallon in some parts of Maine to slight advances in other parts of the area.

East Coast marketers were interested in reports that quantity discounts, specifying unusually low minimum purchases, had been introduced in the Detroit market by White Star Refining and Sun Oil, the discounts in each instance being 2 cents per gallon on relatively small monthly purchases. Marketers in this area have never taken kindly to the quantity discount plan, and it is hoped that the practice will not spread to East Coast markets. The competitive situation in Detroit is unusual, however, in that the major marketers are being called upon to meet the competition of low-priced Rumanian motor fuel.

Some of the major marketers, who had virtually ceased new retail station building during the earlier months of 1932, are now increasing their operations in this direction, and are taking advantage of present low land, labor and materials cost to install retail stations in likely looking neighborhoods. The type of new station now being built is in most instances far ahead of former ones from the standpoint of both elaborateness and beauty.

Kerosene

Activity in kerosene tank car markets was on the increase during the week, and the market was showing a steadier undertone at 5½ to 6 cents per gallon for 41-43 water white in tank car lots, with the inside quotation prevailing. In addition to improved spot demand, there was considerable inquiry reported for kerosene for fall delivery.

In the tank wagon market, kerosene sales were also reported picking up. There were no changes reported in posted prices in New York or New England territory during the week, and the market was likewise unchanged through Standard of New Jersey territory during the period.

Lubs

Volume of trading continued along limited lines during the week, but a little more buying interest was manifested on the low cold test oils during the period, and refiners were looking for considerable improvement in demand during the fall months. Blenders and compounders have not bought in normal volume thus far in anticipation of their winter's requirements, it is reported. There were no price changes reported during the week, and the market tone was still somewhat inclined to softness on cylinder oils.

Spot inquiry for neutral oils had picked up a little, and contract movement was likewise along somewhat broader lines. There were no price changes in this division of ithe lub oil trade.

Heating Oils

Refinery movement of heating oils was more active last week, and the market was in steady position, with 32-36 gravity oil at 4½ cents per gallon and 36-40 gravity oil at 5½ cents per gallon, with 21 gravity industrial oil at 4 cents per gallon, all in tank car lots, f.o.b. terminals.

In the tank wagon market, sellers were quoting 36-40 furnace oil at 7 cents per gallon in most parts of the territory, with the New Jersey and Vermont quotations one-half cent higher. On 32-36 furnace oil, the tank wagon price was 6½ cents per gallon locally, with 28-32 oil held at the same level. Some falling off in the number of new domestic oil burner installations is reported, but notwithstanding this development there are more of these installations in East Coast territory than ever before, and refiners are looking forward to a record volume of sales during the coming winter months. Gallonage during the 1931-1932 heating season was adversely affected in this area by mild weather.

Bunker Oil

A steady undertone features the market for bunker "C" oil, and the posted price is maintained at 85 cents per barrel, in bulk, f.o.b. terminals, of 90 cents per barrel, f.a.s. Business was holding up fairly well during the period, with imported fuel oil moving into consuming channels at the same price as the domestic product.

There has been some falling off in aggregate gallonage of bunker oil, incidental to the higher prices which resulted from the import duties on this oil, with some vessels formerly bunkering at United States ports now taking on their fuel oil supplies at ports convenient to their runs where a more favorable price can be obtained. The higher rate resulting from the tariff, however, has not affected bunkering business with the transatlantic lines to any appreciable extent, it is stated.

Diesel Oil

Conditions in this division of the market were much the same as those characterizing the bunker fuel oil trade, with Diesel oil quoted unchanged at $1.65 per barrel in bulk at terminals, and $1.71½ f.a.s.

Refiners are watching with considerable interest developments in the field of Diesel engine application to automobiles and aircraft. A number of interesting experiments have been made in the automotive field, it is stated, and the potential market for Diesel oil as a fuel for automobiles is coming in for closer scrutiny.

Gas Oil

Routine movement continues in the gas oil market, with refiners continuing to quote 28 gravity plus recycled oil at 4 cents per gallon in tank car lots at the refineries.

Contract movement is holding up to expectations, with considerable of the oil going to utility companies at 3½ to 3¾ cents per gallon on contracts entered into earlier in the year.

A larger intercompany movement of gas oil from the Gulf and California to East Coast ports is looked for during the coming heating season.

Petrolatum

Pharmaceutical manufacturers are inquiring for petrolatum for delivery during the closing quarter of the year in better volume, and sellers reported that some contract business had been booked at current prices. There was relatively little spot movement reported, however, and the little business passing was confined principally to the white grades.

Industrial demand for petrolatum was along limited lines, with spot quotations unchanged.

Paraffin Wax

Domestic consumers were inquiring for fully refined grades in better volume dur-

(Continued on Page 47)

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21.

Gasolines

	Aug. 30		Aug. 23	
OKLAHOMA (Group 3)—				
*U. S. Motor	.04¼	.04⅝	.04¼	.04¾
60-62 400	.04⅜	.04¾	.04⅜	.05
64-66 390	.04⅝	.05	.04⅝	.05
64-66 375	.04¾	.05¼	.04¾	.05⅛
68-70 350	.04⅞	.05¼	.04⅞	.05¼
NORTH TEXAS—				
*U. S. Motor	.04¼	.04½	.04¼	.04½
60-62 400	.04⅜	.04⅝	.04⅜	.04⅝
64-66 390	.04½	.04⅞	.04½	.04⅞
64-66 375	.04⅝	.04⅞	.04⅝	.05
64-66 360	.04¾	.05	.04⅞	.05⅛
†NORTH LOUISIANA—				
*U. S. Motor	.04¾		.05	
60-62 400	.05		.05¼	
†ARKANSAS—				
*U. S. Motor	.04¾		.05	
CHICAGO Based on Okla. (Group 3)—				
*U. S. Motor	.04¼	.04⅝	.04¼	.04½
60-62 400	.04⅜	.04⅝	.04⅜	.04⅝
64-66 375	.04¾	.05	.04¾	.05
Aviation fighting grade	.05	.05¼	.05	.05¼
68-70 360	.05	.05⅛	.05	.05⅛

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. On August 30, in the case of the U. S. Motor and 60-62 400 endpoint grades, where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are five-eighths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotations shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.06⅞	.07	.06⅞	.07
60-62 400	.07		.07	.07⅛
64-66 375	.07¼		.07¼	
68-70 350	.07¼	.07⅜	.07¼	.07⅜

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas:

CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.05½	.06½	.05¾	.06½
58-60 400	.06	.06¾	.06	.06¾
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.08	.08¼	.08	.08¼
Boston	.08¼		.08¼	
Baltimore, Md.	.08¼		.08¼	
Charleston, S. C.	.07¾	.08¼	.07¾	.08¼
U. S. Motor, 65 octane and above:				
New York (Bayonne)	.08½	.08¾	.08½	.08¾
Boston	.08¾		.08¾	
Baltimore, Md.	.08½	.08¾	.08½	.08¾
Charleston, S. C.	.08¼	.08¾	.08¼	.08¾
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05½	.05¾	.05½	.05¾
U. S. Motor, below 65 octane number	.05¼	.05½	.05¼	.05½

Naphthas

OKLAHOMA (Group 3)—	Aug. 30		Aug. 23	
50-52 450 (blending)	.04⅝	.04⅝	.04½	.04⅝
PENNSYLVANIA (inland refineries)—				
50-54 340-450 (blending)	.06½	.06¾	.06½	.06¾
ARKANSAS—				
48-50 450 (blending)	.04⅝	.05	.05	.05⅛
CHICAGO Based on Okla. (Group 3)—				
50-52 450 (blending)	.04⅝	.04⅝	.04½	.04⅝
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06¼	.06½	.06¼	.06½
Lacquer diluent, 180 i.b.p.-250 e.p.	.08⅝	.08⅝	.08⅝	.08⅝
Lacquer diluent, 140 i.b.p.-200 e.p.	.08¾	.09	.08¾	.09
Rubber solvent, 63-70 gr., 100 i.b.p.-300 e.p.	.06¼	.06½	.06¼	.06½
Stoddard solvent, 300 i.b.p.-410 e.p. over 100° flash	.05½	.05¾	.05½	.05¾
Pet. thinner, 290, 300 i.b.p.-415 e.p., over 83° flash	.05¼	.05½	.05¼	.05½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06	.06¼	.06	.06¼
Petroleum spirits	.04⅛	.05¼	.04⅛	.04¼

Natural Gasolines

	Aug. 30		Aug. 23	
OKLAHOMA (Group 3)—				
Grade 18-55	.02¾		.02¾	.02⅞
Grade 26-70	.02¼		.02¼	
Grade 30-70	.02⅛		.02⅛	
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.03		.03	.03⅛
11 lb. v.p. (max.)	.03¾	.04	.03⅞	.04
NORTH TEXAS—				
Grade 18-55	.02⅝	.02¾	.02¾	
Grade 26-70	.02¼		.02¼	
Grade 30-70	.02⅛		.02⅛	
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.03		.03	
11 lb. v.p. (max.)	.03¾		.03¾	.03⅞
NORTH LOUISIANA—				
Grade 26-70	.02½		.02½	
CALIFORNIA—				
75-78 375	.04¼	.05¼	.04¼	.05¼

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

*All grades have minimum recovery of 96 (natural gasoline method).

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Aug. 30		Aug. 23	
41-43	.03	.03⅛	.03	.03⅛
42-44	.03⅛	.03¼	.03⅛	.03¼
NORTH TEXAS—				
40-41	.02¾		.02⅝	.02¾
41-43	.02⅞	.03	.02⅞	.03
†NORTH LOUISIANA—				
41-43	.03½		.03½	
42-44	.03¾		.03¾	
†ARKANSAS—				
41-43	.03½		.03½	
PENNSYLVANIA (inland refineries)—				
45	.04⅜		.04½	.04¾
46	.04½		.04⅝	.04⅞
47	.04⅞		.05	.05⅛
CHICAGO (Based on Group 3)—				
41-43	.03	.03¼	.03	.03¼
42-44	.03⅜	.03⅝	.03⅛	.03⅜
*CALIFORNIA—				
38-40 high burning test	.04	.04¾	.04	.05
NEW YORK (Bayonne, N. J.)—				
41-43	.05½	.06	.05½	.06
GULF COAST (domestic)—				
41-43 water white	.04¼	.04½	.04¼	.04½

*For Pacific Coast consumption.
†For Arkansas, Louisiana and Mississippi delivery.

Tractor Fuels*

OKLAHOMA (Group 3)—	Aug. 30		Aug. 23	
39-40 prime white	.02¾	.03	.02¾	
38-40 light straw	.02⅝	.02¾	.02⅝	
NORTH TEXAS—				
38-40 light straw	.02⅝		.02⅝	
CHICAGO (Based on Group 3)—				
38-40 light straw	.02⅞	.03	.02⅞	.03
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.04¼		.04¼	

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

Furnace Oils*

OKLAHOMA (Group 3)—	Aug. 30		Aug. 23	
32-36 straw	.02⅝	.02¼	.02¼	.02⅜
36-38 straw	.02⅝	.02⅞	.02½	.02⅝
38-40 straw	.02¾	.02⅞	.02⅝	.02¾
39-41 prime	.02⅞	.03	.02¾	.02⅞
NORTH TEXAS—				
38-40 straw	.02¾		.02⅝	
†NORTH LOUISIANA—				
36-40	.03		.02⅞	
†ARKANSAS—				
32-36	.03		.02⅞	
CHICAGO (Based on Group 3)—				
32-36 straw	.02½	.02⅝	.02½	.02⅝
38-40 straw	.02⅞	.03	.02¾	.02⅞
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03½		.03½	
NEW YORK (Bayonne, N. J.)—				
32-36	.04½		.04½	
36-40	.04½		.04½	
21 (industrial)	.04		.04	

*Above prices are for furnace oils of zero cold test under 190° F. flash and good odor.
†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

OKLAHOMA (Group 3)—	Aug. 30		Aug. 23	
32-36 (G.O.) cracking stock	.01⅜	.01¾	.01⅝	
U.G.I. (G.O.)	.01⅝		.01½	.01⅝
32-36, zero to 15 (G.O.) high flash	.01¾	.02	.01⅝	.02
28-30, zero to 10	.75		.72½	.75
26-30, zero to 10	.70		.70	
24-26	.47½	.52½	.47½	.52½
20-22	.42½	.47½	.42½	.47½
16-20	.40	.45	.40	.45
Below 16	.37½	.40	.37½	.40
NORTH TEXAS—				
32-36 (G.O.) industrial	.01½		.01½	
22-26	.45	.50	.45	.50
Below 20	.40	.45	.40	.45
NORTH LOUISIANA—				
32-36 (G.O.) zero	.02	.02⅛	.02	.02⅛
14-16	.35	.40	.35	.40
†ARKANSAS—				
32-36 (G.O.) zero high flash	.02¼		.02	
14-16	.35	.40	.35	.40
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.01⅝	.01¾	.01½	.01¾
28-30 (zero)	.75	.80	.70	.75
22-26	.55	.60	.50	.55
18-22	.42½	.47½	.35	.45
Below 18	.30	.35	.30	.35
PENNSYLVANIA (inland refineries)—				
36-40	.03	.03¼	.03	.03¼

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.70	.85	.70	.85
27 plus Diesel	.70	.85	.70	.85
15-19 bunker (at tidewater)	.55	.65	.55	.65
15-19 (cargo lots)	.50	.60	.50	.60
15-19 (tank car)	.40	.60	.40	.60
GULF COAST—				
28-30 (G.O.)	.03	.03⅛	.03	.03⅛
28-30 Diesel	1.50		1.50	
Bunker C (bulk cargoes)	.55	.60	.55	.60
Bunker C (bunkers)	.70		.70	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.65		1.65	
26-32 Diesel (tank cars)	.04		.04	
†Bunker C	.85		.85	

*Lighterage 6½ cents per barrel.
†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

Breeze (screenings)	3.75	4.00	3.75	4.00
Still runs	4.00	4.25	4.00	4.25
Lump and egg	5.50	6.25	5.50	6.25

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

OKLAHOMA (Group 3)—	Aug. 30		Aug. 23	
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09½	.09½	.09¼	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¼	.10½	.10¼	.10½
300-3.5	.11¾	.12	.11¾	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13
500-4.5	.13¼	.13½	.13¼	.13½
100-2 paraffin oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¾	.08	.07¾	.08
200-4	.07½	.07¾	.07½	.07¾

240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10¾	.11	.10¾	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.14	.15	.15	.16
10 pour test	.13	.14	.14	.15
15 pour test	.13½	.14½	.13½	.14½
25 pour test	.12¾	.13¼	.12¾	.13¼
30 pour test	.11	.12	.12¾	.13
180 vis., No. 3, 25 pour test	.15½	.16	.15½	.16
200 vis., No. 3:				
Zero pour test	.21	.22	.22	.23
10 pour test	.19	.20	.21	.22
15 pour test	.17½	.18	.19½	.20
25 pour test	.16½	.17	.17	.17¼
30 pour test	.16¼	.16¾	.17	
GULF COAST—				
Pale Oils:				
100-2-2½	.05		.05	
200-3	.06½		.06½	
300-3	.07		.07	
500-3½	.08	.08½	.08	.08½
750-3½	.09	.09½	.09	.09½
1,200-3½	.10½	.11	.10½	.11
2,000-4	.12	.12½	.12	.12½
Red Oils:				
200-5-6	.05	.05½	.05	.05½
300-5-6	.05½	.06	.05½	.06
500-5-6	.06¾	.07	.06¾	.07
1,200-5-6	.09½	.10	.09½	.10
2,000-6 plus	.11	.11½	.11	.11½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.07¾	.08	.07¾	.08
200-2½-3	.07¾	.08	.07¾	.08
300-3-3½	.08¼	.08½	.08¼	.08½
350-3-4	.08¾	.09	.08¾	.09
400-3-4	.09¼	.09¾	.09¼	.09¾
450-3-4	.09¾	.10	.09¾	.10
550-3-4	.10¼	.11	.10¼	.11
Red Oils:				
200-4½-5	.07	.07¼	.07	.07¼
300-5-6	.07½	.07¾	.07½	.07¾
350-5-6	.07¾	.08	.07¾	.08
400-5-6	.08	.08¼	.08	.08¼
450-5-6	.08¼	.08½	.08¼	.08½
500-5-6	.08½	.08¾	.08½	.08¾
600-5-6½	.08¾	.09	.08¾	.09
700-6½ plus	.09	.09¼	.09	.09¼

750-6½ plus	.09	.09½	.09	.09½
900-6½ plus	.12	.13½	.12	.13½

Bright and Steam Refined Stocks

	Aug. 30		Aug. 23	
OKLAHOMA (Group 3)—				
630 light green	.07¾	.08	.07¾	.08
630 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stock:				
190-200 D	.21		.21	
150-160 D, 0-10	.20		.20	
150-160 D, 10-25	.19½		.19½	
150-160 D, 25-40	.19		.19	
150-160 E	.19		.19	
PENNSYLVANIA—				
600 S.R.	.13½	.14	.14	.15
650 S.R.	.17	.17½	.17	.17½
600 Pennsylvania flash	.18	.18½	.18	.18½
600 D filtered	.22½	.23	.22½	.23
600 E filtered	.16¾	.17	.16¾	.17
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis. 210-540-550 flash:				
10 pour test	.27	.29	.27	.29
15 pour test	.26	.26½	.26	.26½
25 pour test	.23		.25	.25½
35 pour test	.23		.25	

Wax and Petrolatum

(Prices per pound)

	Aug. 30		Aug. 23	
OKLAHOMA (Group 3)—				
124-126 white crude scale	.01⅝	.01¾	.01⅝	.01¾
PENNSYLVANIA—				
122-124	.01⅞		.01⅞	
124-126	.02		.02	
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02⅝		.02⅝	
125-127	.02⅞		.02⅞	
130-132	.03¼		.03¼	
133-135	.04		.04	
135-137	.04⅛		.04⅛	
Petrolatum in barrels in carload lots:				
Dark green	.01¾		.01¾	
Amber	.02⅛		.02⅛	
Extra amber	.02½		.02½	
Cream	.04⅝		.04⅝	
Lily white	.05½		.05½	
Snow white	.06½		.06½	

Export Prices

	Aug. 30		Aug. 23	
GASOLINE				
GULF COAST—				
U. S. Motor	.04½		.04½	
60-62 400	.04⅝		.04⅝	
61-63 390	.04¾		.04¾	
64-66 375	.05		.05	
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55, 437 e.p.	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Motor, 69 octane num.	.05½		.05½	
58-60 400 endpoint gasoline	.04¼	.05	.04¼	.05
KEROSENE				
GULF COAST—				
41-43 prime white	.04¾		.04¾	
41 water white	.04½		.04½	
LOS ANGELES, CALIF.—				
41-43 water white	.04	.05	.04	.05
LUBRICANTS				
NEW YORK (Bayonne, N. J.)—				
600, steam refined cylinder stocks, in bbls.	.21	.22	.21	.22
650, steam refined	.24	.25	.24	.25
600, Pennsylvania flash	.24½	.25	.24½	.25
630, Pennsylvania flash	.29	.30	.29	.30
600, Warren E	.23½	.24	.23½	.24
6 0, Oil City E	.22½	.23	.22½	.23
Light 140-150 bright stocks	.32	.33	.32	.33
Dark 140-150 bright stocks	.30	.31	.30	.31
NEW YORK (f.a.s.) (in bbls.)—				
600 filtered	.20½	.21	.20½	.21
600 Warren E	.23	.23½	.23	.23½
600 S.R. unfiltered	.20	.21	.20	.21
650 S.R. unfiltered	.23	.24	.23	.24
600 flash S.R.	.24	.25	.24	.25
630 flash S.R.	.29	.30	.29	.30
Bright stock, No. 8 color	.31	.33	.31	.33
Bright stock, No. 6½ color, dil.	.29	.31	.29	.31
NEUTRAL OILS				
NEW YORK—				
Pale Engine Oil, Bulk (vis at 100):				
230-3¾	.10	.10½	.10	.10¼
180-3½	.09½	.09¾	.09½	.09¾
100-2½	.05½	.06	.05½	.06
Red Engine Oil, Bulk (vis. at 100):				
300-6½	.09½	.09¾	.09½	.09¾
250-6	.09	.09¼	.09	.09¼
200-6	.08¼	.08½	.08¼	.08½

Crude Oil Prices

Oklahoma, Kansas, North and East Central Texas

East Texas (Apr. 1, 1932)†	$ .98
East Texas (April 11, 1932)‡	.98
Corsicana heavy*	.64
Other fields	See gravity table

†Posted by Magnolia Petroleum Co., Sinclair Refining Co., Panola Pipe Line Co., Tidal Refining Co. and The Texas Company. ‡Gulf Pipe Line Co. and Atlas Pipe Line Co. *Magnolia Petroleum Co.

Eastern States

JOSEPH SEEP PURCHASING AGENCY
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) (Mar. 14, 1932)	$2.02
Pennsylvania Grade Oil in Southwest Pennsylvania Lines (Aug. 11, 1932)	1.72
Penna Grade Oil in Eureka Pipe Line Lines (Aug. 11, 1932)	1.67
Penna Grade Oil in Buckeye Pipe Line Lines (Aug. 11, 1932)	1.52
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Apr. 26, 1932)	1.05
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931)	.60

PENNZOIL CO.
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.	$1.97
Group B (Includes Titusville district.	1.96
Group C (Includes Turkey and Tidiout districts.	1.95
Group D (Includes Bear Creek and Porkey districts.	1.94
Group E (Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts. Price depends on length of pipe line haul to plant at Oil City.	1.93

TIDE WATER PIPE CO.
(Effective April 25, 1932)

Bradford, Pa.	$2.02
Allegany, N. Y.	2.02

PURE OIL CO.
(Effective April 25, 1932)

Cabin Creek, W. Va.	$1.70
Bradford Hollow, W. Va.	1.70
Kelly's Creek, W. Va.	1.70

Texas Panhandle

Gray County, Wheeler County and Carson-Hutchinson Counties	See gravity table

Rocky Mountain States

OHIO OIL CO.-MIDWEST REFINING CO.	
Ilsa, light (Aug. 24, 1931)	$ .75
Ilsa, heavy (Aug. 24, 1931)	.53
Fort Collins (April 11, 1932)	.86
Florence (April 11, 1932)	.90
Wellington (April 11, 1932)	.76
Greasewood Dome, Colo. (Apr. 11, 1932)	1.00
Dutton Creek (Apr. 11, 1932)	.82
Rock Creek, Wyo. (June 1, 1932)	.90
Frannie, light (Nov. 3, 1931)	.61
Frannie, heavy (Nov. 3, 1931)	.51
Salt Creek	Mid-Continent gravity table
LaBarge	Mid-Continent gravity scale
Big Muddy (Apr. 11, 1932)	.98
Grass Creek (June 1, 1932)	1.10
Elk Basin (June 1, 1932)	1.10
Lance Creek (Apr. 11, 1932)	1.15
Poison Spider (Mar. 5, 1931)	.70
Notches (Mar. 14, 1927)	.65
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage (Apr. 15, 1931)	.98
Lost Soldier (Apr. 12, 1932)	.80
Hamilton Dome (Nov. 2, 1931)	.45
Greybull (Apr. 11, 1932)	1.20
Cat Creek (Apr. 11, 1932)	1.20
Pondera (Nov. 3, 1931)	.90
Sunburst, Mont. (Apr. 11, 1932)	1.05
Hogback, N. Mex. (Aug. 24, 1931)	.80
Border, Mont.	1.55
Red Coulee, Alberta	1.55
Lea County, N. Mex. (Apr. 1, 1932)*	.65
Maljamar (Apr. 11, 1932)	.60
Artesia-Jackson (Apr. 11, 1932)	.65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.

*Posted by The Texas Company. Humble Oil & Refining Co. met this price effective April 11.

West Texas

Iatan and Westbrook	Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties*	$ .65
Lea County, N. Mex. (See Rocky Mountain States.)	
Toborg, Pecos County (Apr. 11, 1932)†	.55

*Effective April 1, 1932, Magnolia Petroleum Co., The Texas Company. Effective April 11, Humble Oil & Refining Co. and Gulf Pipe Line Co. and Stanolind Oil & Gas Co. in Winkler County. †Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B classifications discontinued by leading buyers. See gravity table

Jennings, La. (Apr. 11, 1932)*	$ .75
Lockport, La.	See Gulf Coast gravity table
Refugio, light	See gravity table
Refugio, heavy (Apr. 11, 1932)‡	.80
Markham (Apr. 11, 1932)‡	See Gulf Coast gravity schedule
High Island (Apr. 11, 1932)¶	See Gulf Coast gravity schedule

*Gulf Refining Co. †Magnolia Petroleum

(Continued on Next Page)

Crude Oil Gravity Table

	Kansas and Oklahoma	North and Central Texas	East Central Texas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Salt Creek and LaBarge, Wyoming	North Louisiana and Arkansas	Gulf Coast (Texas-Louisiana)	Cameron, Meadows, Louisiana	Iowa and Lockport, Louisiana
	1	2	3	4	5	6	7	8	9	10
Below 25 degrees	....	....	$.67	....	....	....	$.68	$.80	$.70	$.80
25-25.9 degrees	....	....	.67	....	....	....	.70	.81	.71	.81
26-26.9 degrees	....	....	.67	....	....	....	.72	.82	.72	.82
27-27.9 degrees	....	....	.67	....	....	....	.74	.83	.73	.83
28-28.9 degrees	....	....	.76	....	....	....	.76	.84	.74	.84
Below 29 degrees	$.76	$.76	....	....	....	$.76	....	....	....	....
29-29.9 degrees	.78	.78	.78	....	....	.78	.78	.85	.75	.85
30-30.9 degrees	.80	.80	.80	....	....	.80	.80	.86	.76	.86
31-31.9 degrees	.82	.82	.82	....	....	.82	.82	.87	.77	.87
32-32.9 degrees	.84	.84	.84	....	....	.84	.84	.88	.78	.88
33-33.9 degrees	.86	.86	.86	....	....	.86	.86	.89	.79	.89
34-34.9 degrees	.88	.88	.88	$.76	$.66	.88	.88	.90	.80	.90
35-35.9 degrees	.90	.90	.90	.78	.68	.90	.90	.91	.81	.91
36-36.9 degrees	.92	.92	.92	.80	.70	.92	.92	.92	.82	.92
37-37.9 degrees	.94	.94	.94	.82	.72	.94	.94	.94	.84	.94
38-38.9 degrees	.96	.96	.96	.84	.74	.94	.96	.96	.86	.96
39-39.9 degrees	.98	.98	.98	.86	.76	.94	.98	.98	.88	.98
40 degrees and over	1.00	1.00	1.00	.88	.78	.94	1.00	1.00	.90	1.00

Note—Magnolia Petroleum Co.'s prices in Oklahoma, North Texas and Central Texas, effective April 1, are the same as above given in Columns 1 and 2, excepting that the schedule begins with below 28 degrees, 67 cents; 28-28.9 degrees, 76 cents. The Empire Pipe Line Co. met the Magnolia prices in Kansas and Oklahoma; the White Eagle Oil Corp. in Kansas and the Pure Oil Co., in Oklahoma.

Column 1—Effective April 1, 1932, Continental Oil Co. in Oklahoma and Kansas; Barnsdall Refineries, Inc., and Standish Oil Co. (Phillips Petroleum Co.), in Oklahoma and Kansas; Skelly Oil Co., Kanotex Refining Co., Derby Oil Co., Vickers Petroleum Co., in Kansas; Magnolia Petroleum Co. and Pure Oil Co., in Oklahoma (see note above); White Eagle Oil Corp., in Kansas (see note above); The Texas Company in Oklahoma. Effective April 11, 1932, Stanolind Crude Oil Purchasing Co. in Oklahoma and Kansas; Gypsy Oil Co., Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co. and Carter Oil Co. in Oklahoma. Carter Oil Co.'s schedule begins at below 25 degrees, 68 cents, with 2 cents added for each degree upward.

Column 2—Continental Oil Co., effective April 1, in North Texas only; followed on same day by The Texas Company in North and Central Texas; Magnolia Petroleum Co. in North and Central Texas (see note above); effective April 11, the Humble Oil & Refining Co., Gulf Pipe Line Co. and Stanolind Crude Oil Purchasing Co.

Column 3—Effective April 1, 1932, the Magnolia Petroleum Co., effective April 11, 1932, Humble Oil & Refining Co.

Column 4—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, the Philtex Oil Co. (Phillips Petroleum Co.), but its schedule was carried down to below 30 degrees at 66 cents, with 2 cents added for each degree upward. Effective April 11, other companies met Continental schedule.

Column 5—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, Philtex Oil Co., excepting that latter company carried its schedule down to below 30 degrees at 56 cents, with 2 cents added for each degree upward. Effective April 11, Continental Oil Co. and Gulf Pipe Line Co. met Magnolia Petroleum Co. prices.

Column 6—Midwest Refining Co., effective April 11, 1932.

Column 7—The Texas Company, effective April 1, 1932; Magnolia Petroleum Co., effective April 6, 1932; Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Stanolind Oil & Gas Co. (in Pine Island and Pleasant Hill and in Marion County, Texas) and Gulf Refining Co., effective April 11, 1932.

Column 8—The Texas Company, effective April 1, 1932; Sun Oil Co., April 1, 1932; Humble Oil & Refining Co., effective April 11, 1932; Gulf Pipe Line Co., effective April 11, 1932. Gulf's gravity scale ends with a top of 35 and above at 91 cents. Humble Oil & Refining Co., effective July 18, 1932, posted following prices for Conroe crude: 35-35.9 degrees, 90 cents; 36-36.9 degrees, 92 cents; 37-37.9 degrees, 94 cents; 38-38.9 degrees, 96 cents; 39-39.9 degrees, 98 cents; 40 and above, $1.

Column 9—Magnolia Petroleum Co., effective April 6, 1932.

Column 10—Magnolia Petroleum Co., effective April 6, 1932.

(California Crude Oil Prices on Page 30)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

August 30, 1932

TAXES

The gasoline quotations given in the following tables include the 1-cent Federal tax as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is generally available at 1.5 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 2 cents above the service station price for the regular grade.

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Chicago	17.1	17.1	4.0	10.0
Decatur, Ill.	17.6	17.6	4.0	10.1
E. St. Louis	16.9	16.9	4.0	9.8
Joliet	17.6	17.6	4.0	10.1
Peoria	17.6	17.6	4.0	10.1
Quincy	17.4	17.4	4.0	9.9
Davenport, Ia.	17.7	17.7	4.0	10.4
Des Moines	17.7	17.7	4.0	10.4
Keokuk	17.7	17.7	4.0	10.4
Sioux City	17.3	17.3	4.0	10.0
Duluth, Minn.	18.7	18.7	4.0	11.0
Mankato	18.3	18.3	4.0	9.7
Minneapolis	18.4	17.4	4.0	11.0
LaCrosse, Wis.	19.4	19.4	5.0	11.1
Milwaukee	17.3	17.3	5.0	10.0
Madison	18.5	18.5	5.0	10.2
Detroit, Mich.	13.6	13.6	4.0	10.6
Grand Rapids	16.5	16.5	4.0	10.2
Saginaw	15.6	15.6	4.0	10.6
Evansville, Ind.	18.2	18.2	5.0	†13.9
Indianapolis	18.4	18.4	5.0	†14.1
South Bend	18.7	18.7	5.0	†14.4
Fargo, N. D.	20.1	20.1	4.0	13.0
Huron, S. D.	19.5	19.5	5.0	11.8
Sioux Falls	19.0	19.0	5.0	11.5
K. C., Mo.*	15.1	15.1	4.0	8.7
Springfield*	17.0	17.0	4.0	8.0
St. Louis*	16.6	16.6	4.0	9.4
St. Joseph*	16.7	16.7	4.0	7.5
Wichita, Kans.	15.9	15.9	4.0	7.0
Bartlesville, Ok.	16.5	18.0	5.0	9.0

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

†Includes 4-cent tax. Buyers of kerosene not used as motor fuel can secure refund of tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 1½ cents or more below the price on the regular grade shown above.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

Stanolind Furnace Oil in Chicago

Effective July 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 100 gallons or more, 6 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 5.50 cents; No. 3 (33-36 zero), 200 gallons or more 4.75 cents; No. 4 (12-16 zero), 400 gallons or more, 4 cents. Viscosity of No. 4, 90-115 at 100° F.

Fuel Oils

Chicago Oil Heat Institute Prices

Spot market prices on 350 gallons or over deliveries, and top prices on contracts, respectively: 38-40, 6¼ cents and 8 cents; 32-36, 6 cents and 7½ cents; 28-30, 5¼ cents and 6¾ cents; 24-26, 4½ cents and 5½ cents; 18-22, 4¼ cents and 5¼ cents. On deliveries of less than 350 gallons the spot price is one-half cent higher.

New York and Part of New England District

STANDARD OIL CO. (NEW YORK)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	15.5	16.5	4.0	9.0
New York	16.0	16.0	4.0	9.5
Buffalo	16.5	17.5	4.0	9.0
Rochester	16.5	17.5	4.0	9.0
Syracuse	16.5	17.5	4.0	9.5
Boston, Mass.	15.5	16.5	4.0	8.0
Augusta, Me.	18.0	19.0	4.0	9.0
Manch'tr, N. H.	18.0	19.0	5.0	8.0
Burlington, Vt.	18.5	19.5	5.0	8.5

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.*	22.0	22.0	7.0	11.0
Augusta	19.5	19.5	7.0	13.5
Macon	21.0	21.0	7.0	13.0
Savannah	20.0	20.0	7.0	12.5
Birm'ham, Ala.	20.0	20.0	7.0	11.0
Mobile	20.0	20.0	7.0	8.0
Montgomery	20.0	20.0	7.0	13.5
Jackson, Miss.	20.0	20.0	7.0	10.0
Vicksburg	20.0	20.0	7.0	10.5
Jack'ville, Fla.	20.0	20.0	8.0	11.0
Miami	22.0	22.0	8.0	12.5
Pensacola	22.5	22.5	8.0	12.5
Tampa	21.0	20.0	8.0	9.0
Lexington, Ky.	18.5	18.5	6.0	10.5
Covington	19.0	19.0	6.0	10.5
Louisville	18.0	18.0	6.0	10.5
Paducah	19.5	19.5	6.0	8.0

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Denver, Colo.	16.0	19.0	5.0	12.5
Pueblo	16.0	19.0	5.0	12.5
Grand Jctn.	20.0	23.0	5.0	14.5
Casper, Wyo.	17.0	20.0	5.0	10.0
Cheyenne	18.0	21.0	5.0	11.5
Butte, Mont.	20.0	23.0	6.0	17.0
Billings	23.0	26.0	6.0	15.5
Great Falls	23.0	26.0	6.0	17.0
Helena	22.0	25.0	6.0	17.0
Salt Lake, Utah	18.0	21.0	5.0	16.0
Albu'que, N. M.	18.0	21.0	*7.0	14.0
Boise, Idaho	22.5	25.5	6.0	18.0
Twin Falls	22.5	25.5	6.0	18.0

*One-cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	15.5	18.0	5.0	7.0
Fort Worth	16.5	18.0	5.0	9.0
Houston	15.5	18.0	5.0	10.0
San Antonio	15.5	18.0	5.0	9.0
El Paso	15.5	19.0	5.0	12.0
Texarkana	*19.5	*19.5	5.0	†11.0
Muskogee, Ok.	14.5	17.0	5.0	8.0
Okla. City	14.5	17.0	5.0	8.0
Tulsa	15.5	18.0	5.0	8.0
Ft. Smith, Ark.	*17.0	17.0	7.0	†9.0
Little Rock	*19.0	*19.0	7.0	†11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

*Less 2½ cents to dealers. †Less 2 cents to dealers.

Central South District

STANDARD OIL CO. (LOUISIANA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	18.0	18.0	*7.0	†11.0
Baton Rouge	17.0	17.0	6.0	†10.0
Alexandria	18.0	18.0	*7.0	†10.0
Lafayette	18.0	18.0	*7.0	†10.0
Lake Charles	18.0	18.0	*7.0	†10.0
Shreveport	16.0	16.0	6.0	†10.0
Knoxville, Tenn.	21.5	21.5	8.0	11.5
Memphis	18.0	18.0	8.0	9.0
Chattanooga	21.0	21.0	8.0	11.5
Nashville	20.0	20.0	8.0	11.0
Bristol	22.0	22.0	8.0	12.0
Lt. Rock, Ark.	18.5	18.5	7.0	9.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Kerosene prices in Louisiana include 1-cent tax except New Orleans where tax is 2 cents.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

Pennsylvania-Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Pittsburgh, Pa.	17.0	18.0	4.0	10.0
Philadelphia	16.0	17.0	4.0	10.0
Scranton	16.5	17.5	4.0	10.0
Allentown	16.5	17.5	4.0	10.0
Altoona	17.0	18.0	4.0	10.0
Erie	15.0	16.0	4.0	10.0
Dover, Del.	16.5	17.5	4.0	10.0
Wilmington	16.5	17.5	4.0	10.0
Springf'd, Mass.	16.0	17.0	4.0	8.0
Worcester	16.0	17.0	4.0	8.0
Boston	15.5	16.5	4.0	8.0
Providence, R.I.	14.5	15.5	3.0	8.0
Hartford, Conn.	15.0	16.0	3.0	8.0
New Haven	15.0	16.0	3.0	8.0

Atlantic Coast District

STANDARD OIL CO. (NEW JERSEY)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atl'tic City, N.J.	16.9	17.9	4.0	11.2
Newark	16.2	17.2	4.0	8.5
Annapolis, Md.	18.5	19.5	5.0	10.0
Baltimore	17.9	18.9	5.0	7.0
Cumberland	19.4	20.4	5.0	11.7
Wash'g'n, D. C.	16.4	17.4	3.0	10.0
Danville, Va.	20.6	21.6	6.0	11.9
Norfolk	19.0	20.0	6.0	10.2
Petersburg	20.1	21.1	6.0	11.4
Richmond	19.4	20.4	6.0	10.7
Roanoke	20.6	21.6	6.0	11.9
Charles'n, W.Va.	19.3	20.3	5.0	11.6
Parkersburg	17.9	18.9	5.0	10.2
Wheeling	18.9	19.9	5.0	11.2
Charlotte, N. C.	22.2	23.2	7.0	12.5
Hickory	22.4	23.4	7.0	12.7
Mt. Airy	22.5	23.5	7.0	12.8
Raleigh	22.0	23.0	7.0	12.3
Salisbury	22.3	23.3	7.0	12.6
Charleston, S.C.	20.0	21.0	7.0	10.3
Columbia	21.9	21.9	7.0	12.2
Spartanburg	22.2	23.2	7.0	12.5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and States of Maryland and New Jersey, where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank truck†	Gasoline: Posted retail	Gasoline: Incl'ds tax of	Kero. tank wagon
Fresno	19.5	18.5	4.0	17.0
San Francisco	19.0	18.0	4.0	15.5
Los Angeles	18.5	17.5	4.0	15.5
Reno, Nev.	25.0	24.0	5.0	19.0
Portland, Ore.	21.0	20.0	5.0	16.5
Seattle, Wash.	22.0	21.0	6.0	16.5
Tacoma	22.0	21.0	6.0	16.5
Spokane	25.5	24.5	6.0	20.5
Phoenix, Ariz.	19.5	21.5	6.0	20.5

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

Nebraska

STANDARD OIL CO. (NEBRASKA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Omaha	16.9	17.9	5.0	10.25
McCook	19.0	19.0	5.0	11.75
Norfolk	18.75	18.75	5.0	10.75
N. Platte	19.0	19.0	5.0	11.5
Scottsbluff	19.0	19.0	5.0	11.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

Naphtha

	Tank wagon	Tank car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Ohio

STANDARD OIL CO. (OHIO)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Ohio points	17.0	17.5	5.0	*12.0

TANK WAGON CHANGES

Standard Oil Co. of Indiana, effective August 27, reduced gasoline tank wagon and service station prices 1 cent in Michigan except at points where prices were below normal.

Standard Oil Co. (Kentucky) effective August 19, reduced kerosene tank wagon price at Tampa, Fla., from 10 to 9 cents; effective same date, company reduced gasoline tank wagon and service station prices at Augusta, Ga., to 19½ cents; effective August 26, kerosene tank wagon and service station prices reduced from 12½ to 11 cents at Jacksonville, Fla.

Continental Oil Co., effective August 20, reduced gasoline tank wagon and service station prices 2 cents at Denver and Pueblo, Colo.

Atlantic Refining Co., effective August

(Continued on Page 30)

Crude Oil Prices

(Continued from Preceding Page)

Co. ‡Humble Oil & Refining Co. §The Texas Company. ¶Yount Lee Pipe Line Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$ .84
Urania, La. (Apr. 12, 1932)	.40
East El Dorado, Ark. (Apr. 6, 1932)	.41
Stephens, Ark., below 29° (Apr. 12, 1932)	.41
Stephens, Ark., 29° and above (Apr. 12, 1932)	.84
Other fields	See gravity table

Note—Smackover, all grades, The Texas Company, April 1, 1932; Magnolia Petroleum Co., April 6, 1932; Standard Oil Co. of Louisiana, Gulf Refining Co. and Louisiana Oil Refining Co., April 11, 1932. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.; East El Dorado by Magnolia Petroleum Co., effective April 6, 1932; by Gulf Refining Co., effective April 11, 1932; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

South Central and Southwest Texas

Darst Creek (Apr. 1, 1932)*	$ .75
Luling (Apr. 1, 1932)*	.44
Mirando (Apr. 1, 1932)*	.90
Pettus (Apr. 11, 1932)‡	1.00
Salt Flat (Apr. 11, 1932)‡	.75
Thrall¶	
Lytton Springs (Lockhart) (Apr. 1, 1932)*	.94
Dobrowolski¶	
Same as Mid-Continent gravity scale up to and including 38-38.9°	
Somerset¶	
Same as Mid-Continent gravity scale up to and including 38-38.9°	

*Magnolia Petroleum Co., The Texas Company, Humble Oil & Refining Co. posted 90 cents for Mirando, April 11. ¶Thrall prices same as North Central Texas less 19½ cents per cwt. freight. ¶Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. ‖Pioneer Oil & Refining Co. ‡Humble Oil & Refining Co.

Middle Western States

OHIO OIL CO.
(Effective April 11, 1932)

Lima	$1.15
Wooster	1.15
Illinois	1.15
Indiana	.75
Princeton	1.10
Plymouth	Shut in
Western Kentucky	1.01
Midland, Mich. (July 13, 1932)*	.81
Muskegon (July 14, 1932)†	
Mid-Continent gravity scale	
Muskegon (June 30, 1932)‡	.91
Somerset, Ky. (Apr. 25, 1932)	.81
Hart County, Ky. (June 10, 1932)§	1.00

*Posted by Pure Oil Co. Old Dutch Refining Co. pays 20 cents per barrel over Pure Oil Co.'s posted price. †Naph-Sal Refining Co. ‡Old Dutch Refining Co. §Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

Mexico

Panuco*	$0.45

*F.o.b. ship, based on July transactions and exclusive of production and export taxes and bar dues.

Canada

Ontario (Nov. 3, 1931):	
Petrolia*	$1.90
Oil Springs*	1.97
Alberta (Apr. 22, 1932):	
Turner Valley†:	
Crude oil 40-44.9	1.85
Crude oil 45-45.9	2.10
Crude oil 50 and above	2.80
Crude naphtha	3.32
Discolored naphtha	3.08

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

NEWS FOR SALES DEPARTMENTS

Barnsdall Buys Stock of Two Middle West Jobbers

The Barnsdall Oil Corp., according to an announcement the first of the week, has purchased the remaining common stock of the Mona Motor Oil Co., independent jobbing and compounding company with headquarters at Council Bluffs, Iowa. The Barnsdall corporation has owned a controlling stock interest for two years. The remaining stock was exchanged on a share to share basis. The Mona Motor company has large distribution in Iowa, Toledo, Ohio, and other points.

It was also announced that the Barnsdall corporation has exercised its option to purchase the outstanding 50 per cent interest in the Minnesota Oil & Refining Co., jobbers, with distribution in Minneapolis and St. Paul.

Suit to Test Validity of Refiner-Jobber Contract

The Tide Water Oil Sales Corp., with western headquarters in Tulsa last week filed suit in Federal District Court at Lincoln, Neb., asking for an injunction against the Morservice Co. of that city. The suit involves a contract of a type commonly used by refiners and jobbers in long time agreements covering the sale and purchase of petroleum products.

The complaint cited that the Tide Water corporation entered into an exclusive contract with the Morservice Co. in December, 1931. The corporation spent considerable money in display advertising and other publicity expenses. In March 1932, the Morservice Co. ceased to buy on the contract.

The plaintiff asked the court to put an injunction against the Morservice for buying from other sources and to assess them damages to the amount of $10,000, for this breach of contract.

The Morservice Co. is given, by law, three weeks to make reply to the complaint, at which time the trial on its merits will proceed in the Federal Court at Lincoln.

Less Gasoline Sold by Large California Marketers in July

SAN FRANCISCO, Calif., Aug. 29.—Refining and marketing companies retained their same relative positions in the sale of gasoline in California in July with but few exceptions according to tax returns made public by the state tax agency.

The Standard Oil Co. of California retained its lead for July with the Shell Oil Co. again showing the second largest volume of sales. The Texas Company moved up from eighth position to seventh and the General Petroleum Co. improved its relative position by advancing from seventh to sixth.

Those companies which sold 1,000,000 gallons or more gasoline for July are listed below with the gallonage sold for both July and June shown.

	July	June
Standard	25,778,398	26,939,678
Shell	14,820,533	24,220,686
Union	10,376,572	16,441,548
Associated	9,972,418	15,615,882
Richfield	9,238,779	12,623,044
General Petroleum	5,405,468	8,793,341
Texaco	4,712,869	6,793,341
Wilshire	3,254,997	5,889,987
Macmillan	3,772,551	2,448,234
Western	1,601,546	2,365,468
Hancock	1,560,644	4,966,596
Sunset	1,485,401	4,996,596
Petrol	1,460,210	4,112,629
Rio Grande	1,369,683	9,899,905
Caminol	1,287,301	2,499,836
St. Helens	1,010,734	1,076,667

Summarize Regulations Covering Import Duties on Canadian Oil Shipments

The U. S. Department of Commerce has issued a list of general and preferential import duties on oils shipped into Canada under date of August 18. A summary of revised valuations was also made effective August 16, which are applied to oils shipped from the United States into Canada. The new series of valuations supercedes the list published November 23, 1931.

In the revised valuation of refined gasoline for the purpose of applying the import duty on gasoline shipped from the United States, the following, expressed in cents per gallon of U. S. standard, was adopted: Pennsylvania, New York, and district, which includes Atlantic seaboard. 8.077; Toledo, Detroit, Cleveland, and district, 8.69; Chicago and district, 7.59; Minneapolis and district, 7.94; Wood River, St. Louis and district, 7.19; Mid-Continent district, which includes the States of Oklahoma, Kansas, part of Missouri, part of Arkansas, and North Texas, 5.4; South Texas, Louisiana, and district, 6.99; Wyoming and district, 5.44; and Montana, 8.44. The above prices are subject to the same provisions as those announced in Commerce reports for April 13, 1931.

In the application of these rates the currency unit is taken as the Canadian dollar—$1.00, and the equivalent of unit weight is expressed in ordinary nonmetric units.

The basis for duty, where weight is made a factor, is the net weight except where coverings and goods contained therein are rated together in the tariff.

In making other specifications for governing the application of these rates, the Bureau of Foreign and Domestic Commerce has stated:

For Ad Valorem Duties and Dumping Duty Purposes—Dutiable Value

Fair market value, which shall in no case be lower than the selling price to jobbers or wholesalers generally at time and place of shipment direct to Canada. The value for duty of new or unused goods shall in no case be less than the actual cost of production of similar goods at date of shipment direct to Canada, plus a reasonable advance for selling cost and profit (Canadian minister of national revenue to be sole judge as to what shall be "reasonable advance").

No discount or deduction which is not shown and allowed and deducted on invoices covering sales for home consumption in the exporting country will be allowed in estimating value for duty. However, Canadian importers, when remitting, may take advantage of any cash discounts regularly extended to customers in home market, without dumping duty being applied.

Dumping duty applies to imported goods of class made in Canada, if sold at less than acceptable market value, and is equal to difference between such value and lower selling price to Canadian cus-

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Table 1—Rate of Duty on Crude and Oil Products Shipped into Canada

Tariff No.		Rate of duty General (from U. S.)	Rate of duty Preferential
267	Oils, petroleum (not including crude petroleum imported to be refined or illuminating or lubricating oils), .8235 specific gravity or heavier at 60° temperature	Per gallon ½c	Per gallon ½c
267-a	Crude petroleum in its natural state, .7900 specific gravity or heavier at 60° temperature, when imported by oil refiners to be refined in their own factories	Free	Free
267-b	Crude petroleum not in its natural state, .7900 specific gravity or heavier at 60° temperature, when imported by oil refiners to be refined in their own factories	Per gallon ½c	Per gallon 3/10c
270	Crude petroleum, gas oils, other than naphtha, benzine and gasoline, lighter than .8235 but not less than .775 specific gravity, at 60° temperature	Per gallon 1½c	Per gallon 1c
271	Distilled, refined and purified petroleum oils, coal and kerosene, gasoline, engine distillate, naphtha and products of petroleum not otherwise provided for, lighter than .8235 specific gravity at 60° temperature	Per gallon 2½c	Per gallon 2c
272	Natural casinghead, compression or absorption gasoline, lighter than .6690 specific gravity at 60° temperature, when imported by distillers of petroleum for blending with other gasolines distilled in Canada	Free	Free
268	Illuminating oils, composed wholly or in part of the products of petroleum, coal, shale or lignite, costing more than 30 cents per gallon	Ad valorem 20%	Ad valorem 15%
269	Lubricating oils, composed wholly or in part of petroleum, costing less than 25 cents per gallon	Per gallon 2½c	Per gallon 1½c
273	Lubricating oils, not otherwise provided for, and axle grease. There are regulations to be complied with in importing certain petroleum products, but oils intended solely for use as lubricants and unfit, owing to the properties thereof, for illuminating purposes, are exempted from the provisions respecting inspection, if the packages containing such oils have conspicuously marked or branded thereon the word "Nonilluminating."	Ad valorem 20%	Ad valorem 12½%
275	Oil when imported by mines or mining companies or concerns, to be used in the concentration of ores of metal in their own concentrating establishments, under regulations prescribed by the minister	Free	Free

W. F. MURDY CODE CHAIRMAN

W. F. Murdy, The Texas Company, Detroit, Mich., has been named by W. T. Holliday, chairman of the Division of Marketing of the American Petroleum Institute, as chairman of the Michigan Code Committee, to take the place of H. A. Coffin, who resigned to assume the chairmanship of the Middle Western Region Code Committee. At the same time Mr. Holliday announced the appointment of R. S. Campbell, White Star Refining Co., Detroit; V. T. Whitney, Gulf Refining Co., Toledo, Ohio, and B. L. Snyder, White Star Refining Co., Detroit, as members of the Michigan committee.

George C. Morris, Pure Oil Co., Chicago, has been chosen by Mr. Holliday to take the place of L. S. Wescoat on the Institute's general committee of the Division of Marketing. Mr. Wescoat has resigned.

Allied Marketing Plans Do Not Include Soviet

NEW YORK, Aug. 27.—The American-European oil group, which sponsored the international oil conference held here a few months ago, and the later meeting with Rumanian oil representatives in Paris, has abandoned, for the present at least, any effort to bring the Soviet oil syndicate into a world co-operative group having for its purposes the stabilization of export markets, according to reports from abroad.

Charles E. Arnott, president of Socony-Vacuum Corp., and original sponsor of the series of international conferences, who is now in Europe, has advised American oil interests that no meeting has been arranged by the American, British and Dutch oil executives at which representatives of the Soviet oil industry have been invited to attend, either at New York or in Europe, nor is any such meeting contemplated. This statement is apparently in response to reports in oil circles that a further meeting, in which Soviet representatives would participate, would be held in New York or London some time during September.

The concessions demanded by the Soviet representatives as the price of Russian participation in a world cartel have been found unacceptable to the American-European group, particularly the latter, several of whom have stated that the Soviet during the negotiations in New York had grossly overexaggerated the importance of Russian oil exports. The Soviet during the New York meeting consistently refused to abandon the foreign expansion plan of the Soviet export marketing syndicate unless granted definite concessions by the world oil powers, and were particularly averse to any long-term agreement tying up Russian exports. The American-European group, on the other hand, insisted that Russia's oil exports for a stated period be "pegged" at the 1931 level, with excess production moving into export channels to be handled through the existing marketing facilities of the world powers, and paid for at prevailing world market price levels at the time of shipment.

Since the failure of the world oil powers to reach an accord with the Soviet, the latter has made considerable progress in expanding its foreign marketing operations in many countries where American, British and Dutch oil companies at present have important marketing interests, and unless some sort of a working agreement can be arrived at it is evident that world oil markets are in for further intensive price competition between Soviet oil and that produced elsewhere. In previous "price wars," however, it has been a case of Soviet oil against that of conflicting private companies, but it is now believed that the American-European group has reached such an understanding that in any future price wars involving Russian oil, the world oil powers will present a united front against Soviet oil, which should materially affect the situation, and undermine the balance of power which Soviet oil has had in previous price wars where an unorganized opposition was encountered.

The agreement which the American-European group reached with Rumanian oil interests, which is expected to result in a stiffening of Rumanian export prices, has not yet been ratified, although final action is scheduled for the near future by the Rumanian group. The latter, however, have been inclined to insist upon Soviet participation in any plan for the regulation of export markets.

NATURAL GASOLINE MANUFACTURE

California Natural Gasoline Shipments Much Lower in July

Although natural gasoline production declined in California during July, stocks increased slightly as the result of lesser shipments of the product for coastal and foreign consumption, according to the Bureau of Mines. Refiners also used more natural during the month but 114,422 bbls. were added to storage.

The production of liquefied gas was increased to 390 bbls. daily but sales declined to 373 bbls. During June the opposite condition was obtained.

CALIFORNIA NATURAL GASOLINE STATISTICS FOR JUNE AND JULY
(Daily average in barrels)

	July	June
Total production	33,821	34,842
Stock trans. (deliv.) receipt—net	(334)	(426)
Total	33,487	34,416
Deduct refinery requirements:		
Run to stills	3,489	3,317
Blended	22,214	22,199
Total	25,703	25,516
Gains (losses) unaccounted for—net	(3,506)	(5,224)
Net supply available to market	4,278	3,676
Demand		
Domestic consumption	395	566
Offshore shipments:		
Pacific foreign exports	192	1,728
Atlantic foreign exports	.....	2,828
Intercoastal shipments	.....	2,414
Total market demand	587	7,536
Surplus or (deficit)	3,691	(3,860)
Stocks—Last Day of Period		
Total stocks	2,873,302	2,758,880
Inside Pac. Coast terr. at refineries	2,322,763	2,166,429
Elsewhere	550,539	592,451
Inside Pac. Coast terr.—last day	2,873,302	2,758,880
Inside Pac. Coast terr.—first day	2,758,880	2,874,685
Increase or (decrease) during the period	114,422	(115,805)

OPERATING DATA

	July	June
Number of plants operating	108	109
Daily capacity in M.C.F.	2,598,251	2,599,001

PRODUCTION BY FIELDS—JULY

	Gas treated (M.C.F.)	Natural gasoline produced (gallons)
Fullerton and Whittier	654,999	1,390,053
Midway	1,818,873	3,054,912
Huntington Beach	434,117	1,401,374
Kettleman Hills	6,919,337	10,240,102
Long Beach	3,627,656	8,459,366
Richfield	580,643	482,727
Santa Fe Springs	5,318,557	8,227,806
Seal Beach	561,242	1,000,812
Ventura Avenue	2,679,474	2,764,148
All other fields	4,092,338	6,496,465
Total	26,287,236	43,526,765

PRODUCTION BY METHODS—JULY

Type of plant—	Gas treated (M.C.F.)	Natural gasoline produced (gallons)	Gasoline recovery per M.C.F. gas treated
Oil absorption	26,215,115	43,344,241	1.653
Compressor	172,121	182,524	1.060
Total	26,287,236	43,526,765	1.650

Finished gasoline produced at plants ..... 173 barrels

STOCKS OF NATURAL GASOLINE—AUG. 1

	Barrels
Natural gasoline held by plant operators	63,541
Natural gasoline held by refineries	2,809,761
Total	2,873,302

LIQUEFIED GASES
(Barrels—daily average)

	July	June
Production	390	302
Sales	373	439

Facts Favor Better Market for Natural Gasoline Over the Immediate Future

A series of facts were presented in the August issue of Natural Gasser, the house organ of the Warren Petroleum Co. which offers encouragement to manufacturers and marketers of natural gasoline and its products. The item appeared as follows:

"Refiners and natural gasoline manufacturers are encouraged by the economic developments of the past month. Close analysis of the situation as it affects the oil industry indicates that the tide of economic depression in the oil industry has turned. Many economists now freely predict that the bottom of the downward swing has been passed and we are on our way upward and outward.

"A glance at the accomplishments of the oil business during 1932 contains several optimistic factors, as follows:

"1. The markets for natural gasoline and refined products are strong, and have indicated an upward trend during most of the first six months of the year. The average refinery price for U. S. Motor fuel has been slightly higher this year than in 1931.

"2. Output of natural gasoline has declined nearly 5,000,000 bbls. for the first five months of 1932, compared to first five months of 1931. As a result, the market is firm, with increasing indications of strength and advancing prices.

"3. Mid-Continent crude oil prices advanced about 25 per cent or from an average price of 67 cents per barrel to an average price of 86 cents per barrel for the first half of the present year.

"4. Crude oil production for the first six months of 1932 dropped 19,750,322 bbls. from the same period of 1931, to a total of 396,023,868 bbls. for the period.

"5. Crude oil stocks dropped about 20,000,000 bbls., as of June 1, 1932, compared to June 1, 1931, with a total of 656,955,000 bbls. on hand this year.

"6. Many oil companies have been able to change from red figures to black in their quarterly report for 1932, due to the continued firm prices for petroleum products during the past several months.

"7. The world conference on petroleum, and the international agreement for a world limitation on petroleum production, together with the sentiment of the industry to call a halt on needless production, accumulation of stocks, etc., have given new hope and renewed a spirit of optimism within the oil industry."

Natural Gasoline Plant Operators Share in Program of Annual Safety Meeting

During the week of October 3 to 7, representatives of the refining and other branches of the petroleum industry will meet at the Wardman Park and Shoreham Hotels in Washington, D. C., to consider practical, co-operative methods for the promotion of health and the reduction of accidents.

This program will be conducted by the Petroleum Section of the National Safety Council, as a part of the twenty-first Annual Safety Congress and Exposition. R. E. Donovan, Standard Oil Co. of California is general chairman of the section and H. N. Blakeslee, American Petroleum Institute, is secretary.

The petroleum industry has been making rapid progress in accident control during the past two years. Since 1929, 42 organizations whose employes worked a half billion man-hours have reduced their lost time injuries per 1,000,000 hours worked from 25.85 in 1929 to 13.03 in 1931, or more than 50 per cent. They likewise have reduced their days of absence from accidents per 1,000 hours worked from 2.40 in 1929 to 1.98 in 1931, or about 18 per cent. This is one of the best records among the 28 major industrial groups.

At the Tuesday afternoon session of the petroleum section, C. H. Martin, safety director for the Phillips Petroleum Co., will present a paper on "Safe Gasoline Plant Operations." A paper covering the statistics on the progress of the safety movement will be read by J. W. Meyer, chairman of the statistics committee. Another paper will be read at this meeting covering production practices. This will cover the subject of "Wildcatting and Safety Work" and will be read by R. B. Roaper, safety director for the Humble Oil & Refining Co.

At the Wednesday morning session, J. S. Boylan, director of safety, Continental Oil Co., will talk on "Special Hazards in Gusher Fields." E. R. Alden, assistant safety supervisor of the Vacuum Oil Co., will discuss "Psychology and Accidents—Mental Ease During Depressions." Walter B. Murphy, director of plant personnel and employment, Atlantic Refining Co., will discuss "Safe Pressure Still Operation."

At the Thursday morning session there will be addresses on "Keeping in Step With Progress in Safety Work," "Effects of Competition on Morale of Employes," "Safety Organizations in Sales Divisions" by C. W. Smith, safety director for the Standard Oil Co. (Indiana); "Opportunities in Accident Prevention," by D. L. Cross, petroleum safety engineer for the Standard Accident Insurance Co.

At the Thursday luncheon session H. N. Blakeslee will present "Data on the 1932 Petroleum Section Safety Contest." An officer of the National Safety Council will award National Safety Council trophies and certificates. There will be an address on "National Phases of Accident Prevention Work."

The Thursday afternoon program will include: "Accident Prevention Courses in Universities" by G. M. Kintz, associate engineer, U. S. Bureau of Mines; "Fire and Explosion Problems and Their Solution"; "Solving the Traffic Problem," by C. L. Hightower, safety director, Texas Pacific Coal & Oil Co.; "Solving the Asphyxiation Problem," by J. L. Risinger, manager of accident and fire prevention department, Magnolia Petroleum Co. At this meeting a motion picture will be presented with the title, "A Twenty-Two Million Dollar Pipe Line Job."

County to Regulate Transportation of Gasoline by Truck

LOS ANGELES, Aug. 27.—To promote safety and stop the indiscriminate transportation of unstabilized natural gasoline by truck in Los Angeles County, laws have been enacted which specify the type of container to be used and also the time such gasoline may be transported.

This applies within the unincorporated portion of Los Angeles County as well as to Los Angeles city.

The new measure, drawn by Claude H. McFadden, deputy county counsel, while regulating the transportation of the products, will raise no new revenue. Under the law the county can regulate but not charge for it.

The ordinance is directed particularly at the hauling of casinghead, a highly volatile gasoline. Under the terms of the new measure casinghead cannot be transported between the hours of 7 a.m. and 10 p.m. unless it is confined in metal drums.

Those violating the terms of the ordinance can be given a maximum fine of $500, or six months in jail, or both.

Under the ordinance those who operate tank trucks and trailers must obtain a permit from the County Fire Prevention Bureau for each truck and trailer operated. Such permit must be carried in plain view in the driver's cab.

Tanks must be constructed of 12-gauge steel or other metal of equivalent strength for each tank carrying less than 500 gallons, and of 10 U. S. gauge for 500 gallons or more.

Two fire extinguishers must be carried on each tank truck.

Each tank and trailer must be equipped with surge, or baffle plates, the full width of the tanks.

It will be unlawful for any person to smoke, or light a match or otherwise produce any fire within 10 feet of an oil truck or trailer.

According to county officials it is the first time any attempt has been made in this county to regulate the transportation of gasoline, particularly casinghead, which, it is asserted, is highly explosive and dangerous to carry from one place to another.

Butane Plants Will Be Sold by Standard of California

SAN FRANCISCO, Calif., Aug. 27.—The butane plants operated by the Standard Oil Co. of California through its subsidiaries, the Natural Gas Co. of Washington, and the Natural Gas Co. of Oregon will be disposed of to an outside company if the terms of the contract between the Standard Oil Co. of California and the Pacific Gas & Electric Co. are fulfilled as originally filed.

Several weeks ago these companies announced the agreement whereby Standard Oil would cease to be identified with properties of a public utility nature through its sale of the securities it held in the Pacific Public Service Co. to the Pacific Gas & Electric Co.

This move was interpreted as ending the long contest between the two gas distributing companies for control of the north California gas business. In the new arrangement, Standard will supply natural gas and butane to the Pacific Gas & Electric at specified rates but the operation of the distribution facilities and the sale of the gas to the public will lie entirely in the hands of the Pacific Gas & Electric.

While the natural gas distributing

(Continued on Page 31)

NEWS FOR PETROLEUM REFINERS

Sinclair Expected to Spend $1,000,000 Modernizing Plant

KANSAS CITY, Kans., Aug. 29.—The Sinclair Refining Co. won in its effort to have the grounds of the company's local refinery adjudged outside the city limits and as the result of this agreement with the city is expected to start immediately on a program of modernization of the plant.

An expenditure approximating $1,000,000 will be made and will include a cracking unit and vapor recovery plant. The type of unit likely to be chosen will be the same as recently built in the company's other refineries, namely, one of the company's own design utilizing the De-Florez heater.

The plant contains Isom cracking units which were built early in the history of cracking but which are not now economical to operate in the manufacture of motor fuels of high octane value. The topping capacity of the plant has been rated at 11,000 bbls. daily and it is not known whether changes will be made to increase this capacity.

In the operation of the plant 300 men will be called back to work, some of whom the company has provided work for at the Coffeyville refinery and at other locations while the local plant was idle.

May Build 1,200-Barrel Refinery in New Mexico

DENVER, Colo., Aug. 29.—The Ross Engineering Co., of Albuquerque, has a surveying crew in the field locating the proposed pipe line of the Transport Refining Co. from the Hospah Dome to Baca Station, 19 miles northwest of Grant, N. Mex., on the Atchison, Topeka & Santa Fe Railroad. Baca Station has been designated as a postoffice and will be known as Prewitt. The Transport company proposes to build a 1,200-bbl. refinery at Prewitt. It is understood in Denver that the plans provide for moving the Lovell Refining Co.'s plant at Lovell, Wyo., which has been shut down for some time, to the new site. Leslie Welch, James T. Hurst and C. C. Worland, names well known in the early development of the Big Horn Basin in Wyoming, are mentioned in connection with the new project. They have an option on the wells and properties of the Midwest Refining Co. at Hospah.

NEW UNITS OPERATING

HOUSTON, Tex., Aug. 29.—Shell Petroleum Corp. has virtually completed its $1,000,000 construction program which was started early this year and now all its new equipment is in operation. The additions included one new Dubbs cracking unit, a new gasoline absorption recovery system to replace the original compression plant, and various other pieces of minor equipment and storage. Remaining work consists largely of cleaning up around the plant and the making of minor changes in lines.

NULLIFY KENTUCKY LAW

The Kentucky law enacted last year requiring manufacturers of gasoline to file a bond with the State Tax Commission to cover gasoline tax payments and also to obtain a license, has been held unconstitutional and void by Judge W. H. Fulton of Metcalf Circuit Court of Kentucky. It is expected that the decision will result in the operation of several small plants each refining a few barrels of crude oil daily.

Taxes on Imported Petroleum Products Bring Large Drop in July Shipments

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 29.—Imports of petroleum and products duty free declined in value from $7,722,601 in July, 1931, to $1,484,173 in July, 1932, the first complete month when these imports were subject to the excise duty imposed by the last Congress. Crude petroleum imports declined 3,588,448 bbls., valued at $2,492,967 in July, 1931, to 1,525,341 bbls. valued at $921,510 in July, 1932.

Imports of refined oils registered a large decrease, declining from 3,425,930 bbls. valued at $5,147,797 in July, 1931, to 881,984 bbls. valued at $494,102 in July, 1932. A considerable part of this decrease is ascribed to the effect of the duty although a large part is due to business depression.

Fuel oil imports including topped petroleum declined from 1,886,124 bbls. valued at $1,226,455 in July, 1931, to 815,958 bbls. valued at $393,384 in July, 1932. Unfinished distillates imported in July, 1931, totaled 8,605 bbls. valued at $53,695, declining to 1,195 bbls. valued at $9,163 in July, 1932.

Finished light products imported free of duty in July, 1931, totaled 1,527,902 bbls. valued at $3,783,565, declining to 63,579 bbls. valued at $88,652 in July, 1932.

Illuminating oil was imported in July, 1931, to the extent of 1,934 bbls. valued at $10,331, declining to 193 bbls. valued at $466 in July, 1932. Importations of lubricating oils under the tariff law declined from 1,365 bbls. valued at $33,751 in July, 1931, to 159 bbls. valued at $2,437 in July, 1932.

There was but little change in the importation of paraffin and paraffin wax in the comparison of these two periods. The importation in July, 1931, was 2,537,480 pounds valued at $81,837, declining to 2,184,439 pounds valued at $68,561 in July, 1932.

The decline in value of exports of petroleum and products declined from

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GRANT HEARING ON NAPHTHA

The U. S. Revenue Department has granted a hearing for September 8 in regard to the import tax to be assessed against petroleum naphtha. At present, under a ruling of the Revenue Department, the naphtha is being assessed one-half cent a gallon.

The Revenue Act of 1932 which became effective in June imposed an import tax of 2½ cents per gallon on gasoline or other motor fuel and a tax of one-half cent per gallon on crude petroleum and other liquid derivatives except lubricating oil on which the tax is 4 cents per gallon. Numerous complaints have been made by domestic companies which state that naphtha being imported, after blending with refinery gasoline or natural gasoline, is sold as motor fuel and should be assessed the 2½-cent rate.

PURCHASE HOUSTON PLANT

HOUSTON, Tex., Aug. 29.—The plant of the Crescent Oil & Refining Co., Houston, Tex., has been purchased by the Phoenix Refining Co. of San Antonio, which company, it is reported, will build additional refinery capacity in the near future.

The plant has a capacity of 1,000 bbls. daily and was built about a year ago. It consists of one pipe still and has been operated to supply chiefly local consumption. East Texas crude, shipped by tank cars, has supplied most of the charging stock. The Phoenix Refining Co. has other plants at Dallas and at Pettus.

TINKLER SUPERINTENDENT

P. I. Tinkler has been named as superintendent of the 6,000-bbl. refinery at Allen, Okla., recently leased by the Associated Petroleum Corp. Mr. Tinkler was formerly superintendent of the Wilcox Oil & Gas Co. plant at Bristow.

REFINERY AT FABYAN

CHATHAM, Ontario, Aug. 27.—The new 200-bbl- refinery at Fabyan, Alberta, is reported completed and ready to operate. The plant will handle Wainwright heavy crude, employing the Stillson process.

LARGE NAPHTHA SHIPMENT

NEW YORK, Aug. 29.—The first large cargo of foreign motor fuel to reach an independent East Coast marketer since the import duties became effective in June arrived at Bayway, N. J., yesterday on the tanker Raila from Trinidad. The cargo of 50,000 bbls. of naphtha was consigned to the Hartol Products Corp., well known eastern marketing organization with headquarters here and marine terminal at Bayway. It is understood that the naphtha is subject to an import tax of only one-half cent per gallon and not the 2½-cent rate which applies to finished motor fuels.

PIPE LINE TO BOONE PLANT

The Boone Refining Co., which operates a small plant just east of Arp in the Joiner area, Rusk County, has contracted with the Illinois Pipe Line Co. for connection with nine leases formerly handled by the refining company using trucks to haul the oil. The pipe line company will lay 2,000 feet of 4-inch line from its 6-inch line which connects to the Illinois Pipe Line Co. loading rack south of Arp, and will gather crude for the refining company, delivering it at the refinery for a 5-cent charge. This contract involves 18 wells on the nine leases.

FOURTH CALGARY REFINERY

CHATHAM, Ontario, Aug. 27.—Lion Refining Co., in which J. A. Joncas and M. Poltkins are jointly interested, is completing a small refining plant at Calgary, Alberta. The plant, which will have a capacity of 250 bbls. in a 12-hour run, will operate largely on imported crude, with possibly some Turner Valley naphtha. Mr. Joncas is manager. Arrangements have been made for marketing the output.

BUILD REFINERY AT TRENT

TRENT, Tex., Aug. 29.—Pope Anderson and associates are building a 500-bbl. refinery in the local oil field to process crude from their wells. The equipment is being assembled but the expected date of completion has not been announced.

New York Standard May Build Refinery In Bayonne Section

NEW YORK, Aug. 27.—Standard Oil Co. of New York., Inc., one of the two major operating subsidiaries of Socony-Vacuum Corp., is considering plans for the establishment of a large modern refinery on Staten Island, across the Kills from the Bayonne and Bayway refinery area, it is reported in market circles here.

The first step in the program, it is reported, will involve the establishment of a large bulk terminal on Staten Island, with the first storage units consisting of tankage which will be moved down from the company's present storage at Sparkhill, located on the Hudson River about 22 miles above the New York City limits.

Socony at present has two refineries located in the Greenpoint and Long Island City sections of the city, with aggregate daily throughput capacity of 19,000 bbls., but a refinery site on Staten Island, it is pointed out, would give the company plenty of room for large scale operations and possible later expansion, which would be difficult in the congested manufacturing area where its present plants are located. The Staten Island site likewise would give the company much better water facilities for handling its tanker shipments from California, the Gulf Coast, and elsewhere, as well as in the loading of outbound shipments of products.

Select Refiners to Serve on Nominating Committee

All of the principal petroleum refining areas in the country are represented among the 15 men chosen by D. J. Moran, vice president and chairman of the Division of Refining of the American Petroleum Institute, to serve as a nominating committee at the annual meeting of the organization at Houston, Tex., November 15-17. The plan of government of the Institute provides for general committees of 25 members to direct the detailed activities of the three divisions of refining, producing and marketing. Twenty members of the committee are chosen by a nominating committee of 15 selected by the chairman of the division and 5 are members of the Institute board of directors and are chosen by the president. No other nominations are considered in the general meetings of divisions unless they shall be represented by at least 15 enrolled members.

T. G. Delbridge, supervisor, process division, the Atlantic Refining Co., Philadelphia, Pa., is chairman of the nominating committee appointed by Chairman Moran for the Division of Refining, 1932 meeting, and the other members are:

H. W. Camp, Empire Oil & Refining Co., Tulsa; E. M. Craig, Freedom Oil Works Co., Freedom, Pa.; J. L. Finley, Humble Oil & Refining Co., Houston, Tex.; G. W. Gray, The Texas Company of Delaware, New York; R. W. Hanna, Standard Oil Co. of California, San Francisco; R. E. Haylett, Union Oil Co. of California, Los Angeles; C. L. Henderson, Vickers Petroleum Co. of Delaware, Wichita, Kans.; Emby Kaye, Skelly Oil Co., Tulsa; E. R. Lederer, Texas Pacific Coal & Oil Co., Fort Worth, Tex.; R. C. Osterstron, Pure Oil Co., Chicago; A. E. Pew, Jr., Sun Oil Co., Philadelphia, Pa.; E. E. Plumly, Magnolia Petroleum Co., Beaumont, Tex.; G. H. Taber, Sinclair Refining Co., New York; and F. W. L. Tydeman, Shell Petroleum Corp., St. Louis, Mo.

Standard of Pennsylvania Now Headed by J. H. Senior

(Continued from Page 14)

W. E. Black and L. E. Ulrope, who remain from the old board.

Mr. Keppel's return to 26 Broadway has been followed by several changes in the marketing field of Standard Oil Co. of New Jersey. Chief among these was the appointment of F. H. Skehan as assistant salesmanager in Newark, under G. S. Boetsma. Mr. Skehan was formerly manager of the Paterson district, and takes over his new duties after more than 26 years with the company. He has spent his entire career in the New Jersey sales field, starting as a junior clerk in the Newark stock department in 1906 and rising through the ranks of collector, substation examiner, general salesman, sales promoter and district manager.

Succeeding Mr. Skehan in charge of the Paterson district is Walter R. Hanby, who moves over from Avon, his former district, which has now been merged with the Red Bank district, under Philip Moore.

Further promotions in the company's sales organization include the transfer of P. P. Baeyerts to Memphis, Tenn., as assistant branch manager for the Standard Oil Co. of Louisiana. Succeeding Mr. Baeyerts as branch lubrication assistant is V. C. Pritchett, lubrication engineer.

Summarize Regulations on Canadian Oil Imports

(Continued from Page 27)

tomer (not to exceed 50 per cent of value in any case).

Method of Payment of Duty

Canadian dollars. (American values are, for duty purposes, translated into Canadian funds at the rate of exchange prevailing on date of shipment.)

Customs Surtaxes—Special Excise Tax

Three per cent, based on duty-paid value; applies only to imported goods.

Applies to practically all imported goods, with two notable exceptions: (a) Goods sent by mail or express valued duty-paid at $25 or less; (b) certain articles subject to other excise taxes, which include passenger automobiles (except settler's effects), cigars, ale, beer, porter and stout.

Sales Tax

(Applies to imported as well as domestic goods.) Six per cent on most class of goods; 3 per cent on a few specified products. On imported goods based on duty-paid value (value plus duty) and payable at time of importation unless imported by licensed manufacturers of taxable articles for sale or by licensed wholesalers or jobbers for resale. Many products, including certain foodstuffs and necessities, are exempt from sales tax.

Rates of Duty—General (Highest)

Apply to imports from the United States and other foreign countries having no commercial treaty arrangements with Canada. Also to products of countries entitled to lower rates, when the goods are not shipped directly.

Intermediate

Apply to Brazil, Italy and colonies; Czechoslovakia; Denmark; Belgium-Luxembourg, and colonies; Estonia; Finland; Hungary; Latvia; Lithuania; Netherlands and colonies; Norway; Portugal; Rumania; Spain (and certain possessions); Sweden; Switzerland; Yugoslavia; Argentina; Colombia; Venezuela; and Japan, provided the goods are imported direct from such foreign countries or from a British country.

British Preferential

To products from most British sources, when coming direct. Special preferences to Australia limited to articles listed in Canada-Australia Trade Agreement of 1931, with British preferential rates on all other Australian products. New Zealand products also receive special or British preferential rates under Canada-New Zealand Trade Agreement of 1932.

Most British goods entitled to preference are granted, in addition, a discount of one-tenth of the duty, when conveyed directly to Canada without transshipment.

Consular Fees

No consular fees, as consular invoices are not required.

Special Commercial Invoices

Invoices of prescribed form "M" or "N" (three or more copies) to be mailed to importer, two of which certified by the shipper, are for the Canadian customs officers. If exporters use their own billheads, the certificate of value must be written, printed or stamped thereon. The invoices (in triplicate) are also required for shipments by parcel post or by letter mail, when covering goods for sale, regardless of value, and also when not for sale if valued at more than $50 ($100 at some of the larger ports where examiners can determine accurately the value of the goods). These must also be mailed to the importer or addressee—not included in the package.

U. S. Export Declaration

Three or more copies are desirable, two being required by the United States customs, a third for the convenience of the Canadian customs, and some railway companies require copies.

Imperial Measure

It is illegal to offer for sale in Canada articles in containers marked in U. S. gallons. A container holding 1 U. S. gallon could be marked "Contents five-sixths Imperial gallon" (Imperial gallon = 1.2009 U. S. gallons). The Department of Inland Revenue has stated that "Packages and container goods may be put up and sold without any reference to the measure of the contents, or the contents may be indicated by weight in pounds or ounces, but if any reference whatsoever is made to the contents by measure, it must be in Dominion measure."

Excise Tax Brings Drop in Petroleum Imports

(Continued from Page 29)

$21,975,481 in July, 1931, to $14,044,268 in July of this year. Crude petroleum exports declined from 2,620,953 bbls. valued at $1,716,082 in July, 1931, to 2,249,712 bbls. valued at $2,285,994 in July of the present year.

Natural gasoline exports in July totaled 13,079 bbls. valued at $15,850.

Refined oils exported in July, 1931, declined from 8,441,037 bbls. valued at $19,045,924 in July, 1931, to 4,482,953 bbls. valued at $10,885,559 in July, 1932.

Exports of gasoline, naphtha and other finished light products in July, 1931, totaled 4,165,944 bbls. valued at $9,006,695 compared with 2,200,476 bbls. valued at $5,327,666 in July, 1932. Nearly all, or 2,119,932 bbls. of this gasoline went abroad in bulk.

Exports of illuminating oil declined from 1,213,980 bbls. valued at $3,264,273 in July, 1931, compared with 858,130 bbls. valued at $1,774,785 in the same month of the present year. Of this oil exported in June, 1932, 788,526 bbls. were shipped in bulk. Gas oil exported in July, 1931, declined from 2,502,665 bbls. valued at $2,312,374 to 540,882 bbls. valued at $644,683 in the same month of this year. Fuel or bunker oil for vessels in foreign trade (not included in domestic exports) declined from 3,839,000 bbls. valued at $3,231,000 in July, 1931, to 3,247,000 bbls. valued at $2,517,000 in the same month of this year. Of this oil 1,409,402 bbls. went to American vessels and 1,838,440 to foreign vessels.

Lubricating oil exported in July, 1931, totaled 518,787 bbls. valued at $4,336,710 compared with 267,200 bbls. valued at $2,617,966 in July of this year. Of this oil shipped last July, 152,940 bbls. were red and pale, 7,074 bbls. were black and 107,186 bbls. were cylinder oil.

Exports of lubricating greases declined from 6,957,641 bbls. in July, 1931, to 4,655,635 bbls. in last July. Exports of paraffin wax declined from 17,282,651 pounds in July, 1931, to 13,959,695 pounds in July, 1932. Of the quantity exported in July of this year 3,750,146 pounds were unrefined and 10,209,549 pounds were refined.

Petroleum asphalt shipments declined from 18,611 tons in July, 1931, to 16,725 tons in the same month of this year, and the exports of petroleum coke increased in the same periods from 1,702 to 5,582 tons.

TANK WAGON CHANGES

(Continued from Page 26)

20, established gasoline tank wagon prices of 15 cents and service station of 16 cents at Erie, Pa. Prices include state and Federal taxes; effective August 26, company made several changes in gasoline tank wagon and service station prices at points in New England states.

Standard Oil Co. of Louisiana, effective August 24, reduced the gasoline tank wagon and service station prices at Chattanooga, Tenn., and August 25 made the same reduction at Alexandria, Lake Charles and Shreveport, La.

Standard Oil Co. of Ohio effective September 1 reduced gasoline tank wagon and service station prices 1 cent on regular grade and Ethyl Gasoline.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA

(Effective June 26, 1932)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Signal Hill (Long Beach)	Alamitos Heights, Seal Beach, Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Athens, Rosecrans, Domingues	Montebello	Wheeler Ridge	Coalinga	Whittier-LaHabra
14-14.9	$ .65	$ .65	$ .65	$ .65	$ .65	$ .65	$ .65	$ .65	....	$ .55	$ .55	....	$ .65	$ .55	$ .55	$ .55
15-15.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.55
16-16.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.55
17-17.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.55
18-18.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.55
19-19.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.55
20-20.9	.69	.71	.69	.69	.69	.69	.69	.65	....	.59	.59	....	.65	.57	.59	.59
21-21.9	.74	.74	.77	.74	.74	.74	.74	.66	....	.63	.63	....	.67	.60	.62	.73
22-22.9	.79	.79	.82	.78	.79	.79	.79	.70	....	.69	.69	....	.70	.63	.65	.77
22-23.9	.84	.84	.88	.82	.84	.84	.84	.76	....	.75	.75	....	.73	.66	.68	.81
24-24.9	.89	.89	.92	.86	.89	.89	.89	.81	.73	.81	.81	.89	.76	.69	.72	.89
25-25.9	.93	.93	....	.91	.93	.93	.93	.86	.79	.87	.87	.93	.80	.72	.75	....
26-26.9	.97	.97	....	.96	.97	....	....	.90	.84	.92	.91	.97	....	....	....	....
27-27.9	1.00	....	....	....	1.00	....	....	.94	.89	.97	.94	1.00	....	....	....	....
28-28.9	1.03	....	....	....	1.03	....	....	.98	.94	1.02	.99	1.03	....	....	....	....
29-29.9	1.06	....	....	....	....	....	....	1.02	.98	1.07	1.02	1.06	....	....	....	....
30-30.9	1.09	....	....	....	....	....	....	1.05	1.02	1.12	1.05	1.09	....	....	....	....
31-31.9	....	....	....	....	....	....	....	....	1.06	....	....	1.12	....	....	....	....
32-32.9	....	....	....	....	....	....	....	....	1.10	....	....	1.15	....	....	....	....
33-33.9	....	....	....	....	....	....	....	....	1.14	....	....	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	....	1.18	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	....	1.22	....	....	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same prices as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Domingues, Torrance, Santa Fe Springs, Playa Del Rey, Coyote, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum Co. adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon, and Olinda, up to 35.9 degrees; Richfield, Midway-Sunset, Kern River, Poso, Round Mountain, and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 65 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 82 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.9 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans, General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 84 cents and Standard's prices for oil of higher gravity.

Associated Oil Co., effective June 26, met Standard Oil Co.'s prices in Signal Hill, Huntington Beach, Seal Beach, Alamitos Heights, Richfield, Torrance, Inglewood, Athens, Rosecrans, Domingues, Santa Fe Springs, McKittrick, Kern River, Midway Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Beiridge and Coalinga.

Kettleman Hills—The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over, $1.03, Standard Oil Co. Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Santa Paula—The Union Oil Co. and The Texas Company, effective June 26, posted as follows: 14 degrees to 19.19.9 degrees, 60 cents; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 72 cents; 22-22.9 degrees, 75 cents; 23-23.9 degrees, 78 cents; 24-24.9 degrees, 81 cents 25-25.9 degrees, 84 cents; 26-26.9 degrees, 87 cents; 27-27.9 degrees, 90 cents; 28-28.9 degrees, 93 cents; 29 degrees and above, 99 cents

Shiells Canyon and South Mountain—The Texas Company, effective June 26, posted same prices as in Santa Paula.

Orcutt—The Union Oil Co., effective June 26, posted prices as follows: 16 degrees to 19.9 degrees, 55 cents; 20-20.9 degrees, 60 cents; 21-21.9 degrees, 63 cents; 22-22.9 degrees, 69 cents; 23-23.9 degrees, 75 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 87 cents 26 degrees and above, 92 cents.

Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.

Newhall, McKittrick and Kern River—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.

Elwood Terrace—Standard Oil Co., effective June 26, 1932, posts 33-33.9 degrees, $1.04; 34-34.9 degrees, $1.10; 35-35.9 degrees, $1.14 36-36.9 degrees, $1.22; 37-37.9 degrees, $1.28. All prices f.o.b. ships.

Ventura Avenue—General Petroleum Co. and Associated Oil Co. effective June 26 posted as follows: 22-22.9 degrees, 72 cents; 23-23.9 degrees, 77 cents; 24-24.9 degrees, 82 cents; 25-25.9 degrees, 86 cents; 26-26.9 degrees, 90 cents; 27-27.9 degrees, 93 cents; 28-28.9 degrees 96 cents; 29-29.9 degrees, 99 cents; 30 degrees and over, $1.02.

Potrero—Associated Oil Co., effective June 26, posted same prices as are paid by all companies in Athens, Rosecrans and Domingues

Commission Engineers Recommend Cut in Gulf Coast Allowable 10 Per Cent

AUSTIN, Tex., Aug. 30.—Allowable oil production in the Gulf Coast area will be reduced to 90 per cent of the present output in any field where the production is in excess of 3,000 bbls. daily if a recommendation made by its engineers at a hearing of the Railroad Commission is adopted.

Orders already entered and others expected will result, it was said, in reduction for the Southwest Texas Field. Calculations have not yet been made by Chief Oil and Gas Supervisor R. D. Parker, but it is probable net reductions will be 10,000 bbls. and, as the field is developed, will amount to more.

There will be no further curtailment of production in the Van Field at this time as there is no evidence of physical waste.

Commissioner Ernest O. Thompson's order to J. S. Hudnall, consulting geologist for the commission, to make a personal investigation of the South Texas Field and secure data at first hand, had not been carried out owing to a lack of time.

Today's hearing covers the Conroe Field and Wednesday the commission will meet at Amarillo for a hearing on the West Texas Field. An effort to have the recommendation of Petroleum Engineer W. F. Knode of the Railroad Commission relative to the Fox Field in Refugio County stricken out failed.

Chairman C. V. Terrell announced at the opening Monday that the five fields would be considered in the following order: Southwest Texas, Gulf Coast, Van, Yates and East Texas. No argument or discussion would be permitted until after the testimony.

The present allowable for the five fields is as follows: Van, 50,000 bbls.; Yates, 65,000; Gulf Coast, 110,000; East Texas, 325,000, as per the output of April 2, 1932, and adopted as a commission order; Southwest Texas, no definite allowable, for the area, but with allowable for each individual field.

Mr. Knode was the first witness. The marginal fields in Southwest Texas would be eliminated from his consideration, he said. He would make no recommendation of as small an allowable as 200 bbls., based on a 10-acre spacing.

Fox Field

R. A. Shepherd of the United Production Corp. entered a protest to Mr. Knode's recommendation regarding the Fox Field in Refugio County. The recommendation provided for drilling one well to 20-acre spacing, to avoid intense and indiscriminate drilling, with an allowable of 200 bbls. a day.

J. A. Elkins, representing the Pure Oil Co., asked if any element other than physical waste, as defined by statute, thus omitting extraneous and outside matters, would be considered. Mr. Terrell said the hearing would be confined solely to physical waste. "We have no authority to prorate the State as a body, only pool by pool," he said.

Questioned by Mr. Shepherd as to the Fox Field, Mr. Knode said his investigation began about the middle of March. As far as he knew, none of the wells in the field had been permitted to run wide open. His recommendations as to this field, he said, were based on conditions known by him and reported to him. In the Refugio Townsite Field there had been much waste, he said.

Jack Blalock of Marshall asked Mr. Knode if an oil well in the Fox Field, producing as much as 200 bbls. a day, could be operated without physical waste. There would be some, he said.

John S. Ivey of Houston, chief geologist for the United Production Co., said wells in the Fox Field had always been operated under choke. If permitted to flow wide open the wells would average, in his opinion, from 5,000 to 10,000 bbls. The recommendation of Mr. Knode of a maximum allowable of 200 bbls. might or might not, he said, be conducive to eliminating waste. No general rule would be applicable to all wells in a field, he said.

Chairman Terrell asked: "Then you believe all wells should be run wide open?"

"No, that is not the idea," replied Mr. Ivey.

Mr. Ivey, in response to questions by R. E. Hardwicke of Fort Worth, of the Texas Oil and Conservation Association, said he did not know how the oil-gas ratio was determined when wells came in, except by reports. Wells in the Fox Field were not pinched back because of salt water, he said.

Mr. Shepherd moved that Mr. Knode's recommendation as to the Fox Field be stricken out. The motion was overruled by Mr. Terrell and Mr. Shepherd noted an exception.

Gulf Coast

The Gulf Coast region was taken up at the afternoon session.

Steve Pinckney of Houston offered in evidence the order covering the Gulf Coast hearing and the minutes of the Railroad Commission ordering the hearing.

In Mr. Knode's report of the Gulf Coast petroleum district, the West Columbia Field was designated as the most profitable.

For the benefit of Gen. Jacob F. Wolters, representing The Texas Company, who made the inquiry, it was announced that Mr. Knode would make further investigation of the Dart Creek Field in the Southwest Texas allocation and submit a report.

No recommendation was made relative to a number of the fields in the Gulf Coast territory, defined by Mr. Knode as of marginal character. The Rabbs Ridge Field, Fort Bend County, was referred to as one that might assume major proportions.

Chairman Terrell announced a report was being prepared which would designate the largest field in all the areas involved in Monday's hearing.

Mr. Knode recommended that any field in the Gulf Coast division with a daily production in excess of 3,000 bbls. may produce up to 90 per cent until time is given to prove or disprove waste. When shown that the reduction would kill or injure wells, they shall be exempt. This reduces the output 10 per cent. Two-inch tubing during the flowing period also is recommended.

West Columbia

Stephen Pinckney, representing the W. C. Hogg estate properties in the West Columbia Field, questioned the authority of the commission to take such action, "when no notice giving the commission jurisdiction of the properties of my client was issued. There is no authority or omnibus order for attempting to make such regulation."

Mr. Pinckney asked if any sworn complaint as to waste in the West Columbia Field had been made.

"No complaint has been filed but verbal statements have been made," said Chairman Terrell.

"The statute requires that a hearing based on sworn complaints filed with the commission be held," argued Mr. Pinckney.

"Since no complaint was filed or order issued, I am entering no appearance on the West Columbia Field," Mr. Pinckney announced.

Foran Testifies

Petroleum Engineer E. V. Foran, called on to answer questions as to 2-inch tubing for Gulf Coast wells, said its use was for experimental purposes, when and if found practicable.

Mr. Foran said the recommendation that Gulf Coast production in excess of 3,000 bbls. a day be restricted to 90 per cent of present production applied to all the fields. He did not regard it as a discrimination of one field in the Gulf Coast area against another.

It was declared by Mr. Foran, who joined in recommendations as to the Gulf Coast division, that he began his first investigation of this section 30 days ago. The proposed restriction to 90 per cent of present production was to determine whether waste might be reduced.

"If a method is found to limit the nonfluctuating flow, the inference is that waste may be adduced," he said.

"Whose wells do you want to experiment with?" asked Mr. Pinckney.

"I haven't any individual wells in mind, but they can be described. I think the reduction will be of benefit to the operators," replied Foran.

After Mr. Foran said he had heard of no complaints in the Gulf Coast district, Commissioner Thompson observed: "We have reason to believe there is waste in the district." The complaints, he contended, do not have to be sworn.

Mr. Foran did not think changing the recommendation to 200 bbls. a day would prevent waste. Under present physical conditions of wells in the field, a limitation of 200 bbls. might kill a well, he said.

"If you don't know the production of wells in this territory, it seems strange that you would sign an arbitrary reduction of 10 per cent," said S. A. Guiberson, Jr., of Fort Worth.

"Will the decrease of the oil-gas ratio reduce the physical waste?" asked Jack Blalock.

"It will not," replied Mr. Foran when Mr. Blalock insisted on an affirmative or negative answer.

It was the purpose of the order recommending restricted production to have it directed to all wells where workable, declared Mr. Foran.

The report on which the recommendation was based, prepared by an engineer of the commission, submitted several weeks ago, was filed with the commission, after objection to it being read at the hearing was made.

Rabbs Ridge

It was recommended by Mr. Knode that a temporary order limiting wells in the Rabbs Ridge Pool in Fort Bend County to 240 bbls. per day be made permanent.

Elwood Fouts of the Harrison Abercrombie Co., Houston, entered protest to the recommendations regarding the Gulf Coast area, made by the commission engineers, representing all operators in the district who do not specify otherwise. Objection may not be made when the order is issued, Mr. Fouts said.

J. S. Hudnall, consulting geologist for the Railroad Commission, admitted on the stand he had no knowledge of waste in the Gulf Coast district.

When the report on the Van Field was read by Mr. Knode no evidence of physical waste was in evidence, hence no curtailment could be recommended regarding present production. Proration, according to the statute, must be based on physical waste.

Butane Plants Will Be Sold by Standard of California

(Continued from Page 28)

properties thus involved are of much greater importance than the butane plants, it is of interest to the natural gasoline industry to note the part these plants play in the deal.

The Natural Gas Co. of Oregon and the Natural Gas Co. of Washington were organized by the Standard Oil Co. of California for the purpose of supplying gas to sparcely settled communities in which the prospects of growth and development seemed brightest. These butane plants were installed and operated somewhat as a public utility but rates were not provided which provided a reasonable return on the investment in some cases.

These plants were built in the northwestern states as a forerunner of the time when the Standard could extend its gas distribution system into the territory.

Since the present plan does not provide for the Pacific Gas & Electric taking over these plants it is left to the Standard to dispose of these properties. An investment of $2,000,000 is said to have been made in these properties.

Those butane plants which are not included in the Natural Gas Co. of Washington and Oregon company will be supplied with butane by the Standard Oil Co. The price agreed is 1 cent a gallon for the first two years, 2 cents a gallon for the next three years and market thereafter up to 10 years. At the same time, if the butane plants show earnings above charges and 6 per cent on capital investment, these earnings go to Standard for 10 years up to a point equivalent to 3 cents a gallon for butane.

Members of Petroleum Section Attending the Denver, Colorado, Semi-Annual Meeting of the American Chemical Society

Okla. City Allowable in September Cut to 75,720 Bbls. per Day

OKLAHOMA CITY, Okla., Aug. 29.—The Oklahoma Corporation Commission today fixed the allowable crude oil production of the Oklahoma City Field at 75,720 bbls. daily, a decline of 11,630 bbls. from the allowable of August. At the last hearing, the purchasers nominated only 79,715 bbls., but the commission fixed the allowable at 87,350 bbls., same as for the month before.

Of the new allowable, 800 bbls. daily is allocated to the lime zone wells; 11,200 bbls. daily will be allocated to the 112 wells making water; 3,904 bbls. daily goes to new wells; 18,925 bbls. on the flat allowable of 25 bbls. to 757 eligible producers, and 10,000 bbls. daily allocated to underproduction. The remaining 30,855 bbls. will be distributed on a basis of 0.81 per cent.

It was deemed advisable by the commission to allocate part of the allowable to underproduction so that this amount of oil could be wiped out.

To Disregard Some Old Wells

In a journal entry to be issued, the commission will strike off many of the old producers now unable to make their allowables and eliminate accumulated underproduction. In the past a number of wells have been stricken each month, but little headway has been made in clearing up the situation. It was opinion of the commission and company attorneys that this deferred underage was discriminating against other producers whose wells are in good shape. Time will be allowed the old wells to be reconditioned before striking, it was stated.

Runs and Nominations

Daily average pipe line runs from the field for the first 25 days of this month totaled 74,256 bbls. In the following tabulation the pipe line runs are compared with the September nominations, by companies:

	Sept. nom.	Aug. P. L. runs
Champlin	2,000	1,589
Continental	1,380	2,250
Empire Pipe Line	15,000	14,138
Globe Oil & Ref.	7,000	7,234
Magnolia	3,000	3,011
Oklahoma Pipe Line	10,000	10,038
Sunray Oil Co.	....	325
Shell Pipe Line	2,400	1,662
Sinclair Prairie	4,200	3,185
Stanolind	17,000	20,101
Tidal Pipe Line Co.	250	228
Anderson-Prichard	300	122
Canadian P. L.	500	365
Capitol P. & R.	385	122
Century Petroleum	2,500	861
Cushing Oil & Ref.	60	....
I. T. I. O. Co.	5,000	4,909
John H. Peacock	500	589
Petroleum Pipe Line Co.	1,500	617
Independent P. L.	1,500	1,463
White Oak Corp.	1,000	1,096
Major Petroleum	200	131
Firestone Petroleum	75	83
Addition Petroleum Co.	150	145
Total	75,720	74,256

E. G. Dahlgren, chief clerk in the military headquarters, testified that there were 757 wells, with adjusted potentials of 3,812,742 bbls. daily, eligible for production during September. There are 112 wells making 3 per cent or more water.

He gave the gross stocks in the field as of August 1 as 663,643 bbls. and estimated that by September 1 this figure would be increased to 1,133,634 bbls.

Estimated production for the month of August was given as 2,771,927 bbls. and the estimated total pipe line runs as 2,301,936 bbls. Allowable for August was 2,943,170 bbls., which would leave a current underproduction of 171,243 bbls.

RECONDITIONING LINE

LOS ANGELES, Calif., Aug. 27.—Southern California Gas Co. is taking up and modernizing its original Midway-Los Angeles pipe line laid in 1912. Work is now in progress between Taft and Grapevine. Pipe is being uncovered and all joints welded in accordance with present day practice. If necessary new pipe will be laid at various points. The work is expected to be finished in September.

Late Fields

NORTH LOUISIANA

SHREVEPORT, La., Aug. 30. — The Zwolle oil field, Sabine Parish, southwest of the townsite, was extended 1 mile west when the Robers & Sledges' No. 2 Sabine, SE SW SE, Section 5-7-13, came in flowing at the rate of 100 bbls. of oil an hour without choke, from a total depth of 2,465 feet in the chalk.

The well is 1 mile west of Clopton and others' No. 1 Sepulvedo, Section 4-7-13, a pumper, and is 1¾ miles west of the nearest flowing well, the Pelican Natural Gas Co.'s No. 8 Sabine, Section 3-7-13.

The new producer topped the marl at 2,061 feet, at which depth the 6-inch casing was completed. The completion helps to bridge the 7-mile gap with the original West Zwolle or Blue Lake Field in Section 14-7-14.

OKLAHOMA

Gypsy Oil Co.'s No. 1 Master, SE NE, Section 25-6-4, Pottawatomie County, Oklahoma, was swabbing 60 bbls. an hour on Monday from Simpson dolomite at 3,500-13 feet. This well was believed to have been a failure, but deeper drilling uncovered paying production.

The Amerada Petroleum Corp.'s No. 5 in NE SW, Section 25-9-6, Seminole County, was given a potential test early in the week and made 1,937 bbls. in 24 hours, with the aid of a gas lift. It is producing from sand at 4,077-4,104 feet.

Hilton Phillips No. 1, SW SW SE, Section 21-7-4, Pottawatomie County, got Cromwell sand at 3,490-3,530 feet, which carried some oil. It was drilled deeper to the Hunton lime at 3,662-3,818 feet, and when swabbed made 130 bbls. in 12 hours, some of the oil coming from the Cromwell sand.

The Magnolia Petroleum Co.'s No. 1, NW NW NE E half, Section 36-6-4, Pottawatomie County, got an 80-bbl. producer in 42 hours on the pump, from shale at 2,946-54 feet, total depth 2,975 feet, in shale.

The Indian Territory Illuminating Oil Co.'s No. 6, CWL NW SW NE, Section 15-11-3w, Oklahoma City Field, made 3,597 bbls. in four hours from Wilcox sand at 6,370-6,490 feet. Anderson, Kerr and others' well in center of E half SW NW SE, Section 22-11-3w, Oklahoma City Field, produced 2,027 bbls. in two hours from Wilcox sand at 6,484-6,586 feet. It also produced gas at the rate of 25,000,000 feet per day.

KANSAS

Late report on Skelly Oil Co.'s important No. 1 Leisman in Section 20-27s-10w, Kingman County, Kansas, is that the hole will be plugged back with lead wool from bottom at 4,195 feet to about 4,175 feet and then the upper part of the Siliceous lime between 4,175 and 4,093 feet will be tested to learn if there is any oil in this upper part of the formation.

In drilling the well, cable tools were used to complete the hole and the cement plug was drilled out at about 4,091 feet. The hole was full of heavy mud while drilling was carried on to 4,105½ feet, where a showing of gas was made. The mud was then bailed out of the hole and the well tested about 6,000,000 feet of gas at 4,105½ feet. Without again loading the hole with mud, drilling was continued to about 4,109 feet when the gas increased in volume to about 9,000,000 feet and blew the tools up the hole, causing a fishing job.

To recover the tools the hole was again filled with heavy mud and the tools fished out. Drilling was then carried on with the cable tools under mud to 4,195 feet, the present bottom of the hole. Because of the fact that the wark was done with the hole full of mud, no opportunity was offered to make tests between 4,109 and 4,195 feet, and it is for the purpose of testing this portion of the Siliceous lime that the well is now being plugged back.

At about 4,181 to 4,188 feet green shale was encountered with a dolomite at the base of the shale and then the formation changed to a sandy phase of the lime. In this lower portion of the hole about 26,000,000 feet of gas was encountered with from 17 to 40 bbls. of oil per hour. The well made some water with the oil and gas and at first it was uncertain whether the water was formation water or water used in drilling. The amount of water and b.s. has increased and at last report sulphur water was coming from the bottom of the hole, but the gravity of the oil had increased from about 35 degrees to 39 degrees. The volume of gas also increased to over 27,000,000 feet while this test was being carried on.

As this well is located high on the structure it tends to prove a number of things about the region, but at the present gas-oil ratio it is not considered probable that it would ever be produced as an oil well. However, if the plugging back tends to cut off the amount of gas and there is oil coming from the upper part of the Siliceous lime, it will give the owners quite definite information about the formations penetrated that will be valuable in locating additional test wells.

The fact that the Siliceous lime in this well has produced a large quantity of gas along with such oil as the well has made is interesting because most lime wells in Kansas do not have gas accompanying the oil. The well will be further tested this week and if the gas-oil ratio in the Siliceous lime cannot be materially reduced it is quite possible that it will be plugged back to the Lansing formation, from where it is now making about 75 bbls. of oil daily between the 10½ and 8¼-inch casing.

In testing the well, various size chokes were used and back pressures up to as high as 1,100 pounds per square inch put on the formation without materially changing conditions. The percentage of b.s. produced has been gradually reduced, but the amount of water has increased. The combined b.s. and water percentage has been maintained at less than 20 per cent of the oil at all times.

The National Refining Co. and others' No. 1, SE SE SW Section 16-19-9w, Rice County, Kansas, got a showing of oil in conglomerate at 3,175 feet and drilled 20 feet deeper without any increase in oil. The crew was reaming the 6-inch casing.

Big Demand for Oil and Gas Field Map Showing Pool Names

A greater demand than had been anticipated has developed for the large wall map showing all oil and natural gas pools in the United States, compiled and published by The Oil and Gas Journal. The map is of especial value because it lists the pools by name, there being more than 1,100 names of pools tabulated by numbers and arranged by states. This tabulation permits the instant location of any pool. Oil pools are shown in solid red and natural gas pools outlined in red.

The map, printed on especially heavy bond paper, measures 36"x48" and will stand rough usage for years. Information for the map was gathered and checked by the different offices of The Oil and Gas Journal located throughout the United States.

So many requests had been received for a map of this nature it was decided to compile one and make it available despite the great expense involved. Copies of the map may be procured from The Oil and Gas Journal at $2 each. A copy of the map is sent without charge to every new subscriber to this publication.

DRILLING IN OREGON

LOS ANGELES, Calif., Aug. 27.—G. R. Horner, superintendent for the Clarno Basin Oil Co. of The Dalles, Ore., drilling at Clarno south of that city, reports that the well is down 2,523 feet, drilling on a 24-hour basis since July 24, making 20 to 60 feet per day in a formation of black and brown shale. On July 31, while changing bits, gas pressure raised water 28 feet. Cores are declared to have shown oil.

Owing to the heavy gas pressure, control valves have been installed.

R. W. Hendee to Head Western Division of Okla. Nat. Gas Corp.

Robert W. Hendee of Tulsa, senior vice president of the Oklahoma Natural Gas Corp., has been placed in charge of the company's western Oklahoma division with headquarters in Oklahoma City. He will succeed W. P. Canavan, who recently resigned to enter private business. Mr. Hendee will retain his membership on the board of directors of the company.

Robert W. Hendee came to Oklahoma in 1913 with his parents. Later he greduated from Cornell University having majored in engineering. Together with R. F. Shade, Mr. Hendee practiced his profession as consulting natural gas and gasoline engineer. In 1921 he joined the

ROBERT W. HENDEE

Oklahoma Natural Gas Co. as superintendent of the gas measurement division.

Recently the name of Settles Park Station, an Oklahoma Natural Gas Corp. compressor plant near Tulsa, which during the summer months had been converted into a recreation park, was changed to Hendee Station in recognition of the signal service of Mr. Hendee in the development of the Oklahoma Natural's transmission and distribution system.

WORLD OIL CONFERENCE

NEW YORK, Aug. 30.—While other delegations at the recent Paris oil conference have ratified the agreement reached, in principle, the Rumanians have requested an extension until September 15, due to internal difficulties. The request has been granted. No meeting has been arranged by American, British and Dutch oil executives at which representatives of the Soviet oil industry have been invited to attend, either here or in Europe, nor is any such meeting contemplated. Definite word to this effect was received from C. E. Arnott, president of Socony-Vacuum Corp., who is now in Europe.

MAGNETIC STORM

Tucson observatory of U. S. Coast and Geodetic Survey report severe magnetic storm starting at 2 p.m. (C.S.T.), August 27, and still continues at time of going to press. Their telegram follows:

"Storm began twenty-seventh. Twenty. Severe."

RUSSIAN OUTPUT IN JULY

During the first 20 days of July Soviet officials report the total output of oil in the Soviet Union equalled 1,205,200 tons, approximately the same as the output in the corresponding days of June, which was 1,225,800 tons. It represents 51.7 per cent of the estimated output for the month. The daily output in July declined to 60,300 tons, as against 61,300 tons in the first 20 days of June.—Official.

Synthetic Resinous Materials Utilized in Making Protective Coatings for Industrial Purposes

By Wm. T. DEACON

While pigments are essential to paints, the vehicle is by far the most important component and provides the greatest difficulty in formulation. Upon the use of the proper liquid depend the following: Color, working, body, gloss, elasticity, waterproofness, toughness, speed of drying and hardness of film, yellowing, caking of pigments, separation of pigments in film, durability, flow, skinning, running, reactions, ease of wetting and grinding of pigments, etc.

Scientific training is decidedly a recent acquisition to the industry. Scarcely 20 years ago chemists in paint factories were rare, and their functions unimportant. Moreover, little was known about colloidal chemistry. Today most paint plants are supplied with chemists who have a good understanding of colloidal phenomena. The ability of these men to analyze paint, once questioned, is now readily conceded. However, the ability of paint chemists to synthesize is not yet generally recognized. I believe the time is here when they, after analyzing their problems, must synthesize to solve them. Analysis will reveal the conditions which are to be met; then the task is to synthesize or formulate a paint to meet most adequately these conditions. This is possible only when the functions of each ingredient used are fully understood.

Linseed oil, of course, is the preferred vehicle. Yet it must be remembered that paint perishes because of a natural shrinkage which occurs in the oil as it dries. The shrinkage may manifest itself in one of three ways; checking ("alligatoring"), chalking, or peeling. We do not mention blistering, for this is due to faulty application and is an unnatural form of paint perishing. Obviously then, we must formulate so as to prevent any of these three forms of shrinkage from impairing too greatly the serviceability of the paint. Since linseed oil is the shrinkable material, we can at once conclude that it is wise to reduce the volume of oil to a minimum quantity. By reducing the linseed oil, shrinkage (internal stresses) is reduced and we automatically produce a paint in which the pigment is highly concentrated.

During the last year many classes of artificial resinous or synthetic protective coatings have been offered to industry. Considering the many different types including combinations and modifications, it has been almost impossible for the purchaser to keep informed of the latest properties, let alone intelligently determine the one best suited for each purpose.

Synthetic Resins

In any protective coatings made during the last decade, the major vehicles were combinations of natural oils and gums. Synthetic resins are replacing many of the natural gums. This change was prophesied years ago.

More conservative manufacturers interested in the welfare and trend of the industry, without losing balance, have kept abreast. Since the value of research was long ago established, reputable companies with capable research personnel are in an excellent position to evaluate new resinous products. The primary interest of the reputable manufacturer, of course, is their relation to the finished protective coating.

Conservative manufacturers do not lose their heads. They critically examine new ideas, and, judging from past experience, observe as each succeeding storm subsides, few, if any, revolutionary transformations. Instead, we find logical improvements and developments. Improvements have been made; still, those that have withstood the test of time have not been sensational, but logical and sound. They have often been so gradual that they have not been perceptible except to those instrumental in bringing them about.

In any new development it is desirable first to adopt certain definite premises and standards. A safe one, and particularly in the field of protective coatings, is that established materials and practices should not be discarded until their continuation has been proved unsatisfactory and impractical. It is quite possible to make an improvement in one property of a protective coating, but this improvement should not be obtained at a corresponding sacrifice in another. As we all realize, we are actually compounders. Every product is a compromise; that is, properties are interdependent. The best product obtainable is the one possessing the ideal balance of properties. From time to time, as new materials or better processes are developed, improvements can be made in certain properties with no compromise or sacrifice of other desirable properties. This is advancement.

The synthetic resins offer two outstanding possibilities; first, faster and better drying, and, second, greater durability. Industry's problem is to obtain these improvements and any other possible advantages.

Natural and Synthetic Resins

When we heat-treat the natural fossil resins we render them more brittle and less durable, but more soluble in those oils and solvents ordinarily employed in the fields of coating materials. On the other hand, we note that many synthetic resinous bodies when heated become less soluble and increasingly harder, tougher and more durable, a behavior in contrast to that of the natural fossil resin.

The interest in artificial resinous products has steadily developed from the time when chemists looked upon resinification as nothing more than unavoidable nuisance, to the point where chemists, engineers, general technologists and users evinced by their work, applications and inquiries, a lively and effective interest and activity in this ever broadening field of the plastic and allied arts.

There is hardly an important industrial sphere in which artificial resins of one kind or another have not now been profitably applied; and the main reasons why they have spread so much further afield than the older natural products is their unique properties.

Certain manufacturers prefer the term "synthetic resins" to "artificial resins." Synthetic means the "building up" of a material. Synthesis in chemistry means the making or building up of compounds from the chemical elements. In the case of certain synthetic resins such as the phenolics this is theoretically so. The phenolics are made from phenol and formaldehyde, both of which can be synthesized from the chemical elements, carbon, hydrogen and oxygen.

In the broad sense, however, synthetic resins need not be made directly from the elements, but from raw materials which in themselves have no resinous properties. In a still broader sense, synthetic resins include all artificial resins which are not natural or made from the natural gum by simple mechanical process, such as distillation or ageing. In other words, synthetic resins may be made from nonresinous material or from natural resin through a chemical process. The need for synthetic resins was recognized many years ago. The first synthetic resin was the result of the necessity of neutralizing the highly acid, non-waterproof, low melting point rosin or colophony.

E. Schaal was credited with the first German patent on ester gum in 1884. These ester gums or resin-eaters are often described as synthetic resins, but they are not strictly so. They are simply neutralized natural resins, the agent used for the purpose being glycerin instead of lime or other hardening agents. By simply heating a mixture of a resin or acid resin with glycerin or glycol a reaction takes place, water is evolved and the resin is converted into a resin-eater or ester gum.

Artificial resins, which are not cheap natural resins treated to make them harder and more suitable for use for protective coatings but resins made from chemicals of known constitutions, are better entitled to be called "artificial resins."

Artificial resinous protective coatings contain in the vehicle portion artificial or synthetic resins properly classified or divided into two classes:

Class 1—Condensation products.

Class 2.—Polymerization products.

Phenolics

It has long been known that resinous bodies can be formed as condensation products of the interaction of phenols with aldehydes, but it was as the result of Baekeland's research in America in 1907 that the product of phenol and formaldehyde known as Bakelite first became a commercial product.

The electric industry was the first to profit through the use of the new phenol resonoid plastics, but there is a rapidly growing trend toward the employment of these materials for purely structural and mechanical uses; also in the chemical industries they are finding increasing application through their resistance to corroding liquids and gasses.

New Properties—New Materials

It is thus come about that the development of the phenolic plastics, for a long time occupied with satisfying the demands of the electrical industry, has more recently been directed towards supplementing the older standard materials with new materials adapted to uses hitherto not contemplated. It is remarkable indeed that within the past few years two simple chemicals, phenol and formaldehyde, together with their homologues, revolutionized the protective coating field.

Phenolic resins are capable of blending with various materials to add properties lacking or deficient in the resin itself. Just as in the heat reactive type of phenolics, we believe the phenolics finally are converted to a highly polymerized product of constant physical property; the indications are that they do not obtain simply the solution of a resin in a polymerizing oil, but that in the cooking with oil there is produced an oil-phenolic polymerizable complex which retains to a remarkable degree the good properties of both original components, and in some characteristics surpasses either component.

Thus we find advancement made in protective coatings. Soluble phenolic resins are now employed in the products of air-drying protective coatings and in drying time, hardness, flexibility, water resistance, alkali resistance, and under severe conditions appear to be without an equal. The need for protective coatings that protect has long been great, and it is reasonable to expect much longer life from phenolic protective coatings than from the older type oleoresinous coatings.

The important fact is that these phenol resins produce vehicles which stand the most severe weather and marine service and for very noticeably extended periods. They have almost unheard-of water resistance. The vehicles can also be made to dry with exceptional rapidity without sacrificing toughness and durability.

The hard film produced by these resins is characterized by a quality of resiliency and toughness rather than brittleness and is highly resistant to abrasion or marring from mechanical abuse. In chemical resistance the phenolic resins impart to the vehicles their own exceptional properties to a very marked degree. High resistance to the effect of acids is to be expected. The resistance to alkalies is beyond our expectations.

Whereas the usual type of wood oil ester gum varnish shows increased durability, waterproofness, elasticity, etc., as the proportion of China wood oil is increased (or the amount of gum is decreased), the opposite hold true in the phenolic type. Increasing the proportion of resin increases the durability, waterproofness, elasticity. In addition it reduces the drying time, producing harder films, more resistant to acids, alkalies and many organic solvents. Phenolics dry more by polymerization than by oxidation. Resins of this type belong to the Class 1 resins.

Phenolic Type Finishes

Durability—The outstanding ability of varnishes containing phenol condensation products to withstand severe weather conditions has been well proved over a period of years.

Rapid Drying—Unlike any other known resin, the phenol resinoids have been found to exert a powerful accelerating effect on drying of varnishes and have made possible the preparation of rapid drying varnishes and enamels without using excessive quantities of metallic driers and without sacrificing toughness and durability. Although it appears that the effect of the phenol resinoid is to accelerate polymerization rather than oxidation, no satisfactory explanation for this phenomenon has yet been offered.

Toughness—Although the phenol resinoids produce varnishes that are quite hard and difficult to scratch or mar, they are also unusually tough and flexible.

Alkali Resistance—Even when used in small proportions with drying oils, and particularly with China wood oil, the phenol resinoids have been found to produce coatings which have greatly improved resistance to weak alkalies, soaps, etc. Wherever the coating in service is subjected to frequent or overenthusiastic cleaning, this property is of great value, as it is claimed on good authority that many coatings are washed away, not worn away. In many cases it is not sufficient that a finish be merely weather resistant.

Waterproofing—The ability of phenol resinoids to resist moisture has always been one of their strong points and it is not surprising that they impart this quality to oil varnishes to a marked degree. They not only prevent the objectionable whitening characteristic of many natural resins, but also provide films which exert remarkable resistance to the passage of moisture through the film.

Acid Resistance—The phenol resinoids themselves are practically unaffected by most weak acids or their salts, and they impart this quality to drying-oil compositions to a considerable degree, depending, of course, on the relative proportions of resin and oil.

Since the advent of protective coatings containing phenol resinoid, it is possible

to put up a far more effective fight against the destructive action of acids and fumes. The impenetrability of the film deposited by finishes containing these resins completely excluding the vapor or water carrying the acid in solution account for their unusual resistance. Many industries wage a constant and only too often a losing battle against the destruction of machinery and buildings resulting from the necessary presence of acids and acid fumes. Even the best of the older forms of industrial finishes provided only a short lived and weak resistance to these insistant attacks.

Phthalates

Resins of this type are often referred to as alkyds, glyptals and, in England, paralac. They belong to the Class 1 synthetics, being condensation products of glycerin and phthalic anhydride. They include all those complexes resulting primarily from the interreaction of a polyhydric alcohol and a polybasic acid.

Types

In discussing of this type as film forming materials, differentiation is made between three general types, namely heat nonconvertible, heat convertible and oxygen convertible.

The earlier phthalate resins were all of the heat convertible type; that is, on heating they were converted from a readily fusible condition to a nonfusible condition. It was also found possible to prepare both heat nonconvertible and oxygen convertible phthalate resins. The oxygen convertible resins are particularly interesting to the user of protective coatings. These resins on addition of oxygen are converted into gels analogous to drying oils.

Phthalate resins, as available, vary from hard brittle resins to thick rubbery compounds and when solvents are added form the so-called phthalate oils.

Heat Nonconvertible Resins

These resins are prepared by the interreaction of dihydric alcohols with polybasic acids and are obtainable either hard and brittle like ordinary resin, or soft and gummy like a balsam.

Heat-Convertible Resins

Resins of this type are prepared essentially by the interreaction of the higher polyhydric alcohols (tri or above) with polybasic acids. These resins are quite hard, with a tendency to be brittle in their early stages. On heat converting they invariably become very tough, strong and hard. The polyhydric alcohol used in the heat-convertible resins can be replaced in part by a mona or di-alcohol, the polybasic acit with a monobasic acid or both. As long as the replacement is not complete the resultant resin retains its heat-convertibility.

Oxygen-Convertible Resins

These resins are prepared by replacing part of the polybasic acid with the necessary amount of an oxidizable, unsaturated, fatty acid or acids—for example, linoleic, linolenic, oleo stearic, or, what is more economical, with the mixed fatty acids of any one of the drying oils. They are softer, more rubbery, than the heat-convertible resins in the earlier stages and attain greater toughness and elasticity upon gel conversion. As the maximum physical and mechanical properties of film forming materials seem to develop upon a lyphlic sol-gel transition, but little work has been done with the heat-nonconvertible resins, although adhesive transparent film can be formed.

Types of Resin Solutions

Two types of phthalate solution or oils can be prepared using the phthalate resins as a base, namely, baking and air drying. The baking type is prepared from the heat-convertible phthalate resins as the base; the air drying type from the oxygen-convertible phthalate resins. Protective coatings from the former definitely require heating to develop their gel structure which gives them their maximum properties. On the other hand, protective coatings made from air drying type require only exposure to the air; heat simply assists in the gel conversion.

Film Characteristics

The film forming characteristics of the phthalate resins are important and interesting. Only two types are to be considered for protective coatings, heat-convertible and oxygen-convertible. Each produce films with singular characteristics. In general we can divide these solutions into (1) baking, (2) air drying. The former require heat to develop their maximum properties, outstanding of which are toughness, adhesiveness, flexibility and oil resistance. The latter require primary reaction with oxygen, although heat can also be used, in which case its function is essentially to speed up the oxygen reaction. These air drying films possess the same outstanding properties as the films from the baking solution together with an additional pronounced film building characteristic.

The films prepared from baking solutions are invariably very adherent, hard and tough. Properly baked, a very good gloss results. The films can be made exceedingly flexible for their hardness. In baking phthalates there are, of course, two simultaneous changes going on in the course of the film development at the baking temperature, namely, the deposition consequent on the evaporation of the solvent, and the hardening due to heat conversion of the gel structure. The films are resistant to most chemical reagents, being particularly inert to mineral oils.

Films from air drying phthalate solutions are very adhesive and smooth. They generally have a quick initial setup and become quite hard, more so than oil films, but probably not quite so hard as a lacquer. They are very resistant to mineral oils. The solution can be brushed, sprayed or dipped, smooth films resulting in all cases. The use of phthalate resins permits the greatest latitude in modification to meet a specific condition. Hardness or softness, flexibility or brittleness, toughness or friability can be produced almost at will by selecting, mixing and varying the proportion of ingredients and by varying the method of preparation.

Adhesion, flexibility and durability of phthalate resin coatings on outdoor and accelaterated tests are better than in the case of fossil resins or other synthetic resins. What is necessary to know, however, that while they possess this durability to ordinary exposure including rain, fog and snow, that they do not possess high resistance to continued immersion in water. For this reason this type of coating should never be used on such surfaces as ship bottoms, swimming pools, etc. This should also be taken into consideration in testing them. In other words, finishes intended for ordinary outdoor exposure should be tested accordingly and not be subjected to cycles of water immersions to which they will not be subjected in ordinary use.

Flexibility

Retention of flexibility along with increased hardness is one of the most outstanding properties of the phthalates. They give coatings differing in composition from those formerly obtained in that flexibility accompanies hardness. They bring extra durability. Opaque to ultra violet light themselves, phthalates add opacity to protective coatings containing them.

Owing to the inherent elasticity of the phthalates the use of the oxidising oil can be minimized with resultant improvement in gloss retention and likewise in the more permanent retention of flexibility. Both improvements are due presumably to the lessened chances of progressive, destructure oxidation. The ultra violet absorption characteristics, relatively low content of oxidizable matter, and the chemical and physical structure of the phthalate molecules are presumed to contribute to inherent flexibility. This exceptional durability is undoubtedly associated with the unique properties demontstated by phthalates in the interesting and valuable work of D. L. Gamble and G. F. A. Stutz, "Ultra Violet Light Transmission Characteristics of Some Synthetic Resins," Industrial and Engineering Chemistry, Vol. 21, No. 4, page 300 (April, 1929). In this article it is shown that phthalates are extremely opaque to the shorter and more destructive rays of sunlight. Furthermore, these shorter light waves produce less damage to this structure and give less yellowing than any of the other 31 resins (natural or synthetic) tested.

Although prices for synthetic coatings may not at first appear to compare favorably with those of the standard products in use, experience has shown that quite apart from the many distinct advantages of finish and durability mentioned, the saving and time of operation and application often definitely compensates for any initial difference in price. In comparison with other types of finishes synthetics are generally superior as regards flexibility, ageing, weathering and speed of drying.

Coumarone-Indene Resins

These resins belong to the second class of artificial resinous products—those obtained by polymerization. The coumarone resins, including the higher melting indene resins, are truly synthetic, as their origin does not include any material of resinous nature. The 11 years intervening since the close of the World War have witnessed the commercial adoption of some very remarkable synthetic resin.s Prominent among these is the one known as coumarone resin. A very recent development is indene resin, a relative of the former.

There are, in by-product coke over tar, two compounds known as coumarone and indene. Coumarone is a water-white, oily liquid boiling at 172° C. and has a specific gravity of 1.096. Indene is also a colorless, oily liquid, boiling at 182° C., and it has a specific gravity of 1.002. It is from these two liquids that the resins take their names. They are complex polymers or "para" compounds and have a variable molecular weight. The resins are not alone para-coumarone and para-indene, but contain very small quantities of other resin polymers. They are produced by a rather complex process.

The distillate is polymerized by means of acids or other catalysts. The most popular catalyst is 80 per cent sulphuric acid, although aluminum chloride is also effective. The catalysts are removed by decantation and washing with alkaline solutions to remove all traces of acids. The purified naphtha solution with the dissolved resins is distilled, leaving a residue of paracoumarone. Both coumarone and indene can be synthesized.

The coumarone and indene resins are characterized as follows:

1. Durability—Coumarone resins impart outstanding durability to exterior coatings.

2. Drying—A resin gives strength and thorough drying properties to a coating.

3. Hardness—It increases hardness in a protective film and consequently enhances the resistance to abrasion.

4. Waterproofness—The resin is strictly waterproof and builds up moisture resistance in materials that are rather equal in that respect.

5. Acid and alkali resistance—It is unaffected by dilute acids, alkalies or salts. It does not saponify. In this respect, it is probably the most inert of any resin. This property makes the resin valuable for use in any coating where acid or alkali resistance are important.

Indene Resins

The greatest resin contribution to the field of coal tar resin manufacturers has been made by the company producing this resin. They were the first to produce and market, upon a quantity commercial basis, indene resins. Formerly a laboratory curiosity, it is now an industrial certainty.

As stated previously, indene resin is a close relative of coumarone resin. It has many of the same chemical and physical properties. It is inert, nonsaponifying, contains virtually no ash or foreign matter. It is pale amber in color and has the same sparkling brilliancy of appearance. It is in melting point or hardness that we find the principal difference. Indene resin has a melting point of 150° to 160° C. This contrasts noticeably with coumarone resin M. P. 130° to 135° C. As would be anticipated from such a high melting point, the resin is much harder, and increases the hardness and resistance of a protective coating to abrasion.

However, the most valuable consequence of increased melting points is the speed of drying or "setup" the indene resins impart to a protective coating. "After yellowing" in a protective coating is less with indene resin than it is with coumarone resin. It discolors more than many varnish resins, but not enough to prevent its incorporation in many types of clear coatings and in many colors of pigmented coatings.

Aroclors

This is the trade name of chlorinated diphenyl. The high cost of diphenyl has heretofore permitted relatively little research on this material with the idea of developing practical uses for its derivatives. Recently a commercial process has been developed which makes possible the sale of diphenyl at approximately 1 per cent of its former price. This development has made diphenyl easily available to investigators and has stimulated research to find uses for this hydrocarbon.

Following the announcement of the successful production of diphenyl in commercial quantities the manufacturer of this new material was deluged with suggestions for the synthesis of new compounds using diphenyl as a base. The literature reveals the synthesis, physical characteristics and commercial possibilities of chlorinated diphenyl.

The aroclors also are nondrying; they undergo no appreciable oxidation or hardening on exposure to air. Similarly, the aroclor resins are apparently permanently themoplastic. The aroclors are insoluble in water; they are also insoluble in glycerol, and not readily soluble (particularly those of high chlorine content) in the lower alcohols, but they are soluble in a very wide range of other liquids, including practically all of the ordinary organic solvents, solvent mixtures and mineral and vegetable oils.

Commercial Application

Because of their wide range of physical characteristics, the aroclors are being considered for use in a large number of greatly varied industries.

Protective Coatings—The protective coating industries are greatly interested in aroclor and a large amount of work is being done in this line. Quick drying finishes have been made with both the viscous aroclors and the resinous aroclors and the solubility of the viscous products in linseed and tung oils indicates their use as plastic resins or gums for varnishes, especially of the short oil type where failure is due to cracking of a brittle resin present.

Aroclor varnishes are resistant to water and alkali and are to some extent flame resistant. Being light colored themselves and in addition appearing to exert a certain bleaching action on oil during processing, the aroclors produce finished varnishes of very light color.

Waterproofing—Because they are not water soluble and because they have excellent penetrating properties, the aroclor oils and resins should be useful in waterproofing textiles, paper, wood, wallboard, stone, cement, stucco and other materials. The aroclors alone are apparently not suitable for this purpose, but when mixed with other compounds satisfactory results may be obtained.

Flameproofing—One of the first uses considered for the resins when their nonflamability was discovered was as a fireproofing agent for wood. It was found that a practically fireproof product could be obtained, but at a cost considerably greater than when the common mineral salts, such as ammonium phosphate, are used. The treated wood, however, instead of being brittle and lifeless as in the case of the mineral salt process, gains in strength and is indeed a superior product. This treatment, therefore, has a place in the manufacture of articles made

(Continued on Page 39)

Geologists Report on the Results of Survey of New Hebron Oriskany Sand Gas Field

COUDERSPORT, Pa., Aug. 27. — A detailed and instructive report of the Hebron gas field and adjacent regions in Potter County, Pennsylvania, has been prepared by the Department of Internal Affairs, Commonwealth of Pennsylvania. It is a portion of the topographic and geological survey regularly prepared by George H. Ashley, state geologist, well known for his work in the Tioga and Potter County Fields.

The report includes dicussions of the history of the new gas field, structure of this field, the indication of faulting, gas sands, pipe lines, costs of drilling, leasing and closes with a mention of adjacent regions.

The report follows in full:

Gas was discovered in the Oriskany sand on the Hebron anticline, Hebron Township, Potter County, November 10, 1931. The initial well, R. H. Hungiville and others' No. 1 Booth, came in wild and after being controlled was rated at 8,000,000 to 9,000,000 feet a day under 2,135 pounds rock pressure. June 24, 1932, No. 1 Nugent well, 1,500 feet east of No. 1 Booth, was brought in, good for about 16,000,000 feet with rock pressure of 2,160 pounds. That a sizable field will be developed here seems to be assured.

Historical Resume

The attempt to develop an Oriskay field on this anticline was prompted by the discovery of gas in the Oriskany sand on the Sabinsville anticline in Farmington Township, Tioga County, 40 miles east. That field, discovered in September, 1930, now has about 30 wells with an aggregate potential production of about 500,000,000 feet a day. The field has been discussed previously by the Pennsylvanin Geological Survey in bulletins.

Hebron Anticline

Gas has been produced from shallow sands on the Hebron anticline for many years, but the Oriskany sand had never before been tested. The shallow gas field is known as the Roulette Field and is made up of several pools located on the north flank and the southwest plunge of the structure. On the north production extends well into the Oswayo syncline, but the south flank has yielded only a few small wells, and the axis has been productive only on the southwest plunge.

Production is from the Bradford, Richburg and Chipmunk sands, and wells are 1,800 to 2,000 feet deep. The best wells started at 1,000,000 to 1,500,000 feet, but the average well settled rapidly to about 200,000 feet. The gas is wet and has a B.t.u. value of 1,150 to 1,175. Rock pressure varies in the several pools, ranging up to 300 pounds. This shallow production was discovered about 1905 and the field was drilled up about 1910 although some wells have been drilled as recently as 1928. The field is operated by the Allegheny Gas Co.

The Country Rock

Throughout most of the prospective area of the Hebron Field the country rock is the Catskill red beds. Chemung rocks are exposed near the axis of the anticline in the followin stream valleys: Allegheny River for about 1 mile east and west of Roulette; East Branch of Fishing Creek to near Hebron; South Branch of Whitney Creek southeast of Hebron Center.

Pocono rocks cap the hills in the Oswayo Basin and Pocono with small patches of younger rocks cap the hills in the Coudersport Basin.

Structure

The Hebron structure is a distinct dome on the Hebron anticline. Surface structural data are not adequate to permit an accurate graphic picture of the dome but by observing strikes and dips the position of the axis can be defined with fair assurance and by observing the elevation of the base of the Catskill red beds on Allegheny River, Fishing Creek, and South Branch of Whitney Creek where those streams cut into the Chemung at the axis it is possible to get some idea of axial profile.

The axis trends northeast from Roulette and maintains a regular course to near the east line of Hebron Township where it becomes sinuous and apparently dies out in the vicinity of Ellisburg. Northeast of Ellisburg data are few and poor. General indications, however, suggest a northwest dipping monocline in northern Bingham Township; certainly if present at all the anticline is too weak to make its presence felt. The anticline continues southwest of Roulette into McKean County.

The elevation of the base of the Catskill red beds at Roulette (here obtained by graphic reconstruction) is about 1,600 feet, south of Hebron 2,110 feet, and west of Palmatier 2,070 feet. As only red beds are exposed northeast of Palmaiter the northeast plunge cannot be determined by this method. The base of the red beds is not a sufficiently well defined or easily determined horizon to be used with great accuracy, but when used throughout a small area it has some value. An avial profile based upon the data available would show (1) a high extending from the vicinity of the Mattison well to the vicinity of the Tassel well, a distance of about 6 miles. (2) Between the Mattison well and Roulette, a distance of 4 miles, the axis plunges about 500 feet. (3) Northeast of the Tassel well the axis would seem to plunge northeast of the Tassel well and to lose its identity near Ellisburg. The amount of closure on the northeast has not been determined, but may be less than the 500-foot closure on the southwest.

Steepened South Limb

Like most of the Allegheny Front folds that have been mapped, the Hebron shows a steepened south limb. Also, there is fairly good evidence that the south limb is broken. The absence of topographic and detailed geologic maps, and of readily recognized stratigraphic horizons and reliable structural data in this area make it difficult to define accurately the relative steepness of the north and south limbs. The distance from the Hebron axis to the Oswayo axis on the north is about 4 miles and to the Coudersport axis on the south is about 2½ miles. That the Coudersport Basin is deeper than the Oswayo Basin is certain, but we are not prepared to express the relation in terms of feet. On the above basis the south limb may be something like 2 to 3 times as step as the north limb. Most of the dips shown on the map represent sandstones in the red beds. These dips so often are questionable that they should not be used quantitatively. For the sake of clarity, however, we may say that if dips are thought of as being of the order of magnitude of 6 degrees on the south and 2½ degrees on the north the impression probably will not be too much in error.

Evidences of Faulting

The south flank probably is not steepened uniformly. Evidence of faulting was observed at Palmatier and southeast of Hebron. At Palmatier the evidence consists of a belt of steep-dipping to vertical beds that in the farther east exposure is about 20 feet wide. Southeast of Hebron fossiliferous Chemung beds outcrop between Catskill rocks. If the three localities are representative of a fault line then a break exists about half a mile south of and parallel to the axis. Unfortunately no detail of the probable displacement could be worked out.

Other evidence of faulting was Chemung beds at the surface in an otherwise Catskill terrain, observed on the left fork of Dingman Run just west of Coudersport. This is practically on the axis of the Coudersport syncline. Whether there is any connection between this and the other points is not known.

To suggest that the structure is faulted on such meager data may appear to be unwarranted, but it is emphasized here because of experience in the Tioga Field. There faulting was advocated on meager surface data and, although accepted reluctantly, proved to be a serious consideration. The surface evidence was slight and no details could be worked out, but recognition of its presence and timely application of adequate subsurface methods might have saved some dry holes. The fault data observed in the Hebron area are slightly less convincing than those observed in the Tioga Field; it does not seem probable that displacement, if any, can be so great here as it proved to be at Tioga. Even so the indications should not be treated lightly by operators proposing to drill the south flank. What we really are concerned with is the ratio—amount of displacement to effective closure. At Tioga the effective closure varies from a minimum of less than 100 feet to a maximum of less than 300 feet in the several pools. We do not know how many feet of closure will be productive at the Hebron Field. In view of the foregoing it would therefore seem advisable to investigate the possibilities of faulting on this south flank by seismograph measurements before exploring it with the drill.

Catskill-Oriskany Interval

No. 1 Nugent well encountered the Oriskany at 4,877 feet. The well appears to start about 200 feet below the base of the red beds. We should therefore assume an interval of about 5,075 feet between the base of the Catskill and the top of the sand.

Two specimens of Oriskany sandstone blown from No. 1 Nugent well while the well was being drilled in were tested by C. R. Fettke of this survey, and show 9.1 per cent and 9.6 per cent porosity.

In the Tioga Field the porosity ranges from 4 per cent to 11.8 per cent and averages 9.1 per cent for 50 samples tested.

Neither the Booth nor the Nugent well is known to have reached the bottom of the sand. The Nugent well was completed at 12 feet in the sand, at which depth it was reported as drilling in "shale" the report being based upon the smoothness of the bit. If the reported shale is present it may be a parting in the sand and does not necessarily indicate that the sand is only 12 feet thick. The gas is dry, sweet, and has a B.t.u. value of 1,020.

Pipe Lines

The only pipe line in the field is a small line of the Allegany Gas Co. to which the No. 1 Booth well has been delivering gas for some months. It is reported that the New York Natural Gas Corp., which in March completed a 20-inch line from the Tioga Field to Syracuse, will extend that line to the Hebron Field.

Cost of Drilling

Wells equipped for production cost from $20,000 to $25,000. Contract price for drilling is $3 a foot. Four hundred to five hundred feet of 8¼-inch water string is set and 7-inch casing is cemented in the Onondaga lime.

Most of the land on and near the Hebron structure has been leased. A large percentage of the acreage is held by the following companies: Potter Development Co. (Allegheny Gas Co.), Lycoming Natural Gas Co. (Standard Oil Co. of New Jersey), Penn York (Cities Servive), R. H. Hungiville, Williamsport Natural Gas Co., North Branch Development Co. (Pennsylvania Power & Light Co.), Penn United Gas Co., United Carbon Co.

Large sums are reported to have been spent in acquiring favored acreage. The usual royalty offered was one-eighth or 1½ cents per 1,000 feet. Bonus payments of $3 to $10 an acre were common.

The Adjacent Region

A structurally favorable locality on any of the anticlines is considered to be potentially productive Oriskany acreage. It reamins to be demonstrated, however, that gas is present in the Oriskany sand on structures that lie southeast of the Sabinsville anticline. In this respect the results of a well now being drilled on the Marshfield anticline in East Fork district, about 14 miles south of Coudersport, are important.

Smethport Anticline

Gas has been produced from shallow sands on the Smethport anticline in Sharon and Oswayo Townships for many years. Production occurs throughout the axial area in Sharon Township and on both flanks. The field is known as Shinglehouse.

Surface data are so few and poor in this area that few details of this structure can be given. In Sharon Township, Chemung rocks are exposed at the axis throughout a considerable area, but no definite measurement of the relative height of the axis throughout this area was made. The north flank appears to flatten out into a terrance a mile or so north of the axis north of the axis in Oswayo Township.

Harrison Anticline

This anticline lies between the productive Hebron and Sabinsville anticlines, and may logically be expected to produce where structural conditions are favorable. The only well drilled on the Harrison anticline was located well down the south flank in Brookfield Township, Tioga County. It found the sand to be 25 feet thick but nonproductive.

Structurally favorable localities are not well defined by the surface data available. One company that controls most of the acreage on this structure has mapped the surface by using the seismograph.

Maps and Reports

Topographic maps are not available for this area. Mapping of the Coudersport and Smethport quadrangles is in progress by the U. S. Geological Survey in co-operation with the Pennsylvania Geological Survey in 1932.

The geology of the region has not been studied in detail. The only geological report available for Potter County is Volume G-3 of the Second Pennsylvania Survey (1880). This report includes a geological reconnaissance map.

The anticlinal axes of Potter County were mapped during the summer of 1931 and the results published in Bulletin 102-A. The Harrison anticline north of Lewisville was mapped by F. T. Moyer, the remainder of the county by M. N. Shaffner. The Hebron anticline was studied in more detail by Mr. Shaffner and the writer in June, 1932. The work of tracing the anticlinal axis through eastern McKean, Elk, and northern Clearfield Counties is in progress.

Further Injunctions Issued in East Texas District; Auditors Check Crude Runs From Field

By L. E. BREDBERG

DALLAS, Tex., Aug. 29.—East Texas, "the field of injunctions," continues to see more of them issued, some in Travis County Court to prevent companies from running in excess of the daily allowable, while Federal District Judge Randolph Bryant of Tyler issued one August 25 restraining the Texas Railroad Commission and the attorney general from prosecuting penalty suits filed against the American Liberty Oil Co., Golding & Murchison and others for alleged violation of the commission's orders in the field. The companies claimed the penalties asked were excessive and unconstitutional. The matter is to be decided by a three-judge federal court at Houston September 19.

Suits against the companies were filed in Rusk County about two weeks ago, the State asking penalties exceeding $500,000 for oil production in the field above amounts prescribed in the commission's proration orders.

On September 13 another suit will be tried, challenging the authority of the State to enforce its conservation laws and to test validity of the oil and gas conservation statutes. This suit involves nine combined suits in which more than 20 operators and independent companies are plaintiffs. A three-judge federal court will try the case on its merits. The suit is styled Eugene Constantin and others vs. R. S. Sterling and others.

But while the various courts are issuing injunctions, other operators continue to produce more than their allowable, and still others continue to steal oil by the truck loads. Four trucks were caught during the week on one lease, the drivers preparing to load out oil when they were detected and all trucks taken, as well as one of the drivers. The three other drivers temporarily escaped. Men from the field do not hesitate to state that trucks are hauling out stolen oil even in the daytime from some isolated leases.

Oil Thefts

Theft of oil has assumed proportions of a "racket" and without more troops or Texas rangers in the field, will no doubt continue, as the field covers such a vast territory; there are so many wells, and the terrain lends itself to secrecy. One operator in the Gladewater area has constructed a concrete "pill-box" like structure over his well connections to prevent anyone backing a truck up to his well, or connecting a line and pilfering his oil. Only a large shot of high explosive would suffice to open his well to vandals or thieves. Some of the companies have padlocked their wells, but padlocks can be broken, as has already been done in a few cases.

A "pumpers association" has been formed in one part of the field, which is said to be neither more nor less than an organisation sponsored by oil thieves who are endeavoring to bribe pumpers and lease men to steal oil from the leases on which they work. Many major company men, and no doubt many other independent company men, have been approached by men who asked them to absent themselves from the lease for awhile, or brasenly tried to bribe them otherwise, in order to bring in trucks or connect wells with lines, and run illicit oil from leases.

Distribution Report

The latest field distribution report shows 350,860 bbls. run from the field by major pipe lines to local refineries and by tank cars, but many are of opinion excess oil is being run in greater amounts all the time, and it is difficult to estimate just how much oil is being taken from the field. Tank car shipments are gaining, the last report showing the past week's daily tank car shipments averaging 9,775 bbls., while the previous week's daily average was only 5,355, and the week before that, 3,262 bbls. per day.

Military authorities and Railroad Commission men will be asked to investigate the increasing movement of East Texas crude oil by tank cars, this movement having tripled since the commission's order was issued requiring pipe lines to investigate the source of oil which they purchased to run and be prepared to make affidavit that it was produced in accordance with proration regulations before accepting it for shipment. However, most of the tank cars are loaded by small gathering lines owned by small companies or independents, and loaded from tank trucks. This is perhaps one of the methods in use by oil thieves to get rid of their stolen oil hauled by trucks.

It is understood that special complaint will be made against a railroad which accepted for shipment and dispatched several cars of crude before notifying the Railroad Commission. It seems that many are scoffing at the records which are to be kept on production and runs from the field, and the order of the commission requiring meters on all pipe lines from the field has also been ignored by some of the companies. However, elections are now over with, and it is the consensus that officials responsible for regulating the fields will start "cracking down" on all violators, and things will start happening in the field to check excess production and transportation, and also the theft of oil. But the old specter of injunctions looms to throw a monkey wrench into the machinery of orderly production and transportation of crude.

Pipe Line Records

Major pipe line companies in the field and some of the smaller pipe line companies have offered their records to the A.P.I. committee which was recently appointed by President Beaty for the purpose of obtaining first-hand information on pipe line runs from the field, and finding out whether rumors that major companies were guilty of running excess oil was correct. There are five men on this committee, headed by Jack Pew of the Sun Oil Co., Dallas.

A large number of accountants experienced in handling crude oil and pipe line department records have been tendered the committee to help in checking runs by the lines from the field, and the audit will cover all activities of the purchasing and pipe line companies, especially in June and July, when rumored violations were stated to have been most flagrant and general. At least a month will probably be needed to make the audit, which will be submitted directly to the American Petroleum Institute.

With elections out of the way, officials assuming closer watch and exerting more energy in running down violators and oil thieves, it is hoped that, although the period of greater consumption of gasoline is waning and less crude will be needed during the next nine months, the price may be held at its present level of 98 cents. Many East Texas operators are now in Austin attending the Railroad Commission hearing in regard to regulating the many fields of the State. Many of these operators are hoping that some of the other fields may be given smaller allowables, and the East Texas allowable raised to above the present daily amount of 325,000 bbls. If this is done, the per well allowable will be retained at the present figure of 43 bbls. per day, or may be increased slightly. Giving a larger allowable to the field would forestall a bimonthly reduction such as been made in the past, continuously cutting back the per well allowable.

Some of the operators in the field are in favor of changing the proration plan to a well and acreage basis plan, feeling that such a plan would forestall much of the present drilling, but it is felt generally that the commission will not change the present per well basis plan, two of the commission already voicing their opinion for retaining it.

Now 7,700 Wells

There are now over 7,700 wells in East Texas, 122 having been completed during the week, whereas 116 locations were staked. South Gregg and South Rusk Counties are the most active areas. For the week ending August 27 there were 504 active tests in the field, and 56 on the inactive list. There were 43 active wildcats in the entire district. Of the active tests, 243 are in South Gregg, 100 in North Gregg, 79 in South Rusk, 20 in Kilgore (North Rusk), 26 in Smith County, 34 in Upshur County and 2 in Cherokee County.

The Stanolind Oil & Gas Co. has sold its Rettig lease in the J. M. Sparks Survey, in the gas producing area of South Rusk, to the Marr Drilling Co. of Tyler, which has contracted to drill two wells on the lease. The lease will be paid for out of one-fourth of seven-eighths of the first oil or gas produced. One dry hole offsets the lease to the south.

The Marr Drilling Co. and Stanolind Oil & Gas Co. have a rig up on their Jacksonville block in south Cherokee County and will start drilling within a few days. The former has a one-half interest in the block and will do the drilling on the test, which is to go to 5,000 feet.

Another defining test has been completed on the southwestern corner of the field. Merry Brothers and Perini and others' No. 2 Kelly, a south offset to a producer, has tested salt water, and showing no oil, in sand logged from 3,685-86 feet. Elevation is 354 feet, making bottom of hole minus 3,332 feet. These operators brought in the first well in this county several months ago, No. 1 Kelly, on the same lease, thereby opening up another, the fifth for the district, and paving the way for more drilling in the northeastern part of the county, extending the field to the southwest.

Wildcatting Activities

Mundt and others have made location on the W. E. Murray lease in the Marshall Winn Survey, 5 miles southeast of Tyler, in Smith County, and will start a Woodbine test immediately. One dry hole has already been drilled in this area, a little farther to the east.

C. W. Murchison and others have a derrick up on their S. G. Benton lease in the B. G. Reynolds Survey, Henderson County, and will put down a Woodbine test.

Wadley, Evans and Lions have erected a derrick on their C. R. Covin lease in the J. Lounte Survey, Upshur County, and will put down another wildcat test. It is in the center of Gulf Production Co.'s Jamestown block.

Feazell and others' No. 1 McKinley, in the William Robinson Survey, on the east side of the field, North Gregg County, has been completed as a dry hole. Sand was topped at 3,584 feet, and Georgetown lime was topped at 3,609 feet. Total depth of the hole is 3,612 feet.

The Superior Oil Co. of California is trying to reassemble the north and west part of Shell Petroleum Corp.'s old La Rue block in the southeastern part of Henderson County, having around 1,000 acres under lease to date.

Contract has been let to the Rowan Drilling Co. of Fort Worth to drill a Woodbine sand test on Fred F. Harris and others' block of approximately 8,000 acres in Rains County. The test will be on the M. A. Markowitz lands in the Charles Despallier Survey, just west of the town of Ginger. The Gulf Production Co., Sun Oil Co., Amerada Petroleum Corp. and others have been taking acreage around the location. The nearest test was drilled by Greer and others on the Harper farm; another was drilled about 7 miles north and a little east of the new locations.

COMPLETIONS IN EAST TEXAS

Cherokee County

Merry Brothers and Perini's No. 2 Annie Kelley, dry and abandoned, total depth 3,686 feet, tested 400 feet salt water in 20 minutes, top sand 3,685 feet. Rayburn and Glassco's No. 1 Annie Kelley, dry and abandoned, total depth 3,711 feet.

North Gregg County

Abernathy and Kirkpatrick's No. 5 R. M. Woods, top sand 3,616 feet, initial production 40 bbls. in 20 minutes through 1-inch tubing choke, total depth 3,642 feet. Arkansas Fuel Oil Co.'s No. 10 Burnside, top sand 3,489 feet, initial production 27 bbls. in one-fourth hour through three-quarters inch tubing choke, total depth 3,509 feet; No. 4-C McKinley, top sand 3,605 feet, initial production 14 bbls. in one-fourth hour through three-quarters inch tubing choke, total depth 3,624 feet; No. 5 Whittaker, top sand 3,515 feet, initial production 32 bbls. in one-fourth hour through 2-inch open tubing, total depth 3,541 feet. Atlantic Oil Production Co.'s No. 4-B Burnside, top sand 3,470 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,521 feet; No. 16-B W. T. Burnside, top sand 3,486 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,523 feet; No. 4 Castleberry, top sand 3,616 feet, initial production 22 bbls. per hour through tapered tubing, total depth 3,666 feet; No. 19 J. M. Moore, top sand 3,509 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,532 feet; No. 23 Moore, top sand 3,506 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,529 feet; No. 4 McGeorge, top sand 3,489 feet, initial production 180 bbls. per hour through 2-inch open tubing, total depth 3,550 feet; No. 3-A A. Tooke, top sand 3,543 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,595 feet. Atlantic and Sun Oil Co.'s No. 24 M. Hays, top sand 3,500 feet, initial production 180 bbls. per hour through 2½-inch tubing, total depth 3,554 feet.

Darby Petroleum Co.'s No. 5 W. H. Ritchey, top sand 3,529 feet, initial production 48 bbls. in one-quarter hour through 2-inch open tubing, total depth 3,564 feet. Empire Gas & Fuel Co.'s No.

5 J. W. Akin, top sand 3,563 feet, initial production 47 bbls. in one-quarter hour through 2-inch open tubing, total depth 3,630 feet; No. 12 T. W. Lee, top sand 3,525 feet, initial production 37 bbls. in 25 minutes through 2-inch tubing choke on 2-inch tubing, total depth 3,561 feet. Faith Oil Co.'s No. 3 Fuller, top sand 3,661 feet, initial production 100 bbls. per hour through 2-inch open tubing, total depth 3,681 feet. Flemming and Kemball's No. 4 J. G. Barnes, top sand 3,642 feet, initial production 120 bbls. per hour through 1-inch tubing, total depth 3,667 feet. Feazell and others' No. 1 McKinley, top sand 3,584 feet, dry and abandoned, total depth 3,612 feet (William Robinson Survey), top Georgetown lime 3,609 feet.

Guiberson Oil Corp.'s No. 1 C. L. Taylor, top sand 3,516 feet, initial production 40 bbls. in one-half hour through 1-inch tubing choke, total depth 3,568 feet. Gulf Production Co.'s No. 18 M. O. Sheppard, top sand 3,532 feet, initial production 72 bbls. per hour through three-quarters inch tubing choke, total depth 3,559 feet. Humble Oil & Refining Co.'s No. 12 W. W. Holland, top sand 3,602 feet, initial production 20 bbls. in one-quarter hour through three-quarters inch tubing choke, total depth 3,611 feet; No. 15 W. R. Hughes, top sand 3,598 feet, initial production 10 bbls. in one-quarter hour through three-quarters inch tubing choke, total depth 3,623 feet. Lucey Petroleum Corp.'s No. 5 Kinsell, top sand 3,638 feet, initial production 120 bbls. per hour through 1-inch tubing choke, total depth 3,665 feet.

Magnolia Petroleum Co.'s No. 4 Beavers, top sand 3,516 feet, initial production 120 bbls. per hour through 2-inch tubing choke, total depth 3,532 feet; No. 5 Todd-Stinchomb, top sand 3,555 feet, initial production 112 bbls. per hour through 2-inch tubing, total depth 3,564 feet. Marine Oil Co.'s No. 1-A G. W. Richey, top sand 3,506 feet, initial production 32 bbls. in one-quarter hour through 1-inch tubing choke, total depth 3,590 feet. Rio Oil Corp.'s No. 5 Graves, location abandoned.

Selby Oil & Gas Co.'s No. 8-B Snavely heirs, top sand 3,564 feet, initial production 40 bbls. in one-quarter hour through 2-inch open tubing, total depth 3,578 feet. Shell Petroleum Corp.'s No. 4 J. W. Akins, top sand 3,557 feet, initial production 17 bbls. in one-half hour through tapered tubing, total depth 3,625 feet; No. 6 Fishburn, top sand 3,487 feet, initial production 15 bbls. in one-half hour through 2½-inch open tubing, total depth 3,548 feet. Sinclair Prairie Oil Co.'s No. 9-B Akin, top sand 3,538 feet, initial production 30 bbls. in 10 minutes through tubing choke, total depth 3,572 feet. Snowden & McSweeney's No. 1 Bonner, top sand 3,640 feet, initial production 120 bbls. per hour through 2-inch open tubing, total depth 3,684 feet. Steen Drilling Co.'s No. 5 Loden, top sand 3,679 feet, initial production 75 bbls. per hour through 1-inch tubing choke, total depth 3,719 feet. Cecil Story's No. 1 D. McQueen, top sand 3,603 feet, initial production 105 bbls. per hour through open 2-inch tubing, total depth 3,611 feet. Superior Oil Co.'s No. 11 Ingram, top sand 3,552 feet, initial production 58 bbls. in one-quarter hour through 2-inch open tubing, total depth 3,628 feet. Tidal Oil Co.'s No. 3 W. Christian, top sand 3,564 feet, initial production 58 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,594 feet.

W. F. Turner's No. 6 Jones, location abandoned. Atlantic and Wadley's No. 1 Hays, top sand 3,499 feet, initial production 45 bbls. in one-quarter hour through 2½-inch tubing, total depth 3,521 feet. Yount Lee Oil Co.'s No. 6 V. Calvin, top sand 3,588 feet, initial production 67 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,608 feet; No. 3-A M. Smith, top sand 3,545 feet, initial production 76 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,565 feet; No. 6-A M. Smith, top sand 3,575 feet, initial production 77 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,596 feet.

South Gregg County

Arkansas Fuel Oil Co.'s No. 6 Huey-Ross, top sand 3,522 feet, initial production 38 bbls. in one-half hour through open 2-inch tubing, total depth 3,550 feet. Barnsdall Oil Co.'s No. 6 D. Smith, top sand 3,585 feet, initial production 70 bbls. per hour through three-quarter inch tubing choke, total depth 3,612 feet. Bay Oil Corp.'s No. 3 Godfrey, top sand 3,558 feet, initial production 75 bbls. per hour through open tubing, total depth 3,589 feet. Empire Gas & Fuel Co.'s No. 3 Walker, top sand 3,588 feet, initial production 27 bbls. in one-quarter hour through 2½-inch tubing choke, total depth 3,593 feet.

Gulf Production Co.'s No. 14 C. Brown, top sand 3,564 feet, initial production 78 bbls. per hour through three-quarter inch tubing choke, total depth 3,585 feet; No. 4 A. A. King, top sand 3,552 feet, initial production 50 bbls. per hour through three-quarter inch tubing choke, total depth 3,584 feet; No. 2 G. W. Longley, top sand 3,649 feet, initial production 90 bbls. per hour through three-quarter inch tubing choke, total depth 3,659 feet; No. 3 A. Nichols, top sand 3,677 feet, initial production 70 bbls. per hour through three-quarter inch tubing choke, total depth 3,687 feet; No. 17 A. Spear, top sand 3,534 feet, initial production 82 bbls. per hour through three-quarter inch tubing, total depth 3,549 feet.

Invincible Oil Co.'s No. 3 Weiss, top sand 3,628 feet, initial production estimated 80 bbls. per hour through three-quarter inch tubing choke, total depth 3,648 feet. Jordan and others' No. 1 A. A. King, abandoned, total depth 2,300 feet. Louisiana Oil & Refining Co.'s No. 7 Griffin, top sand 3,540 feet, initial production 43 bbls. in one-quarter hour through 2-inch tubing choke, total depth 3,565 feet. Munn and others' No. 1 I.&G.N. Railroad, top sand 3,555 feet, initial production 35 bbls. in one-half hour through 2-inch open tubing, total depth 3,630 feet. Russell Petroleum Co.'s No. 1 A. A. King, top sand 3,570 feet, initial production 50 bbls. per hour through open tubing, total depth 3,590 feet.

Shell Petroleum Corp.'s No. 4-B J. S. Elder, top sand 3,565 feet, initial production 14 bbls. in one-half hour through tapered tubing, total depth 3,573 feet; No. 6-A B. F. Laird, top sand 3,600 feet, initial production 15 bbls. in one-half hour through tapered tubing, total depth 3,620 feet. Sinclair Prairie Oil Co.'s No. 1-C A. A. King, top sand 3,392 feet, initial production 9 bbls. in 8 hours, total depth 3,450 feet, will rig up pumping unit (E. H. Angell Survey); No. 12 A. Lockhart, top sand 3,669 feet, initial production 30 bbls. in one-quarter hour through open tubing, total depth 3,679 feet.

Carroll & Baine's No. 1 King Brothers Gin Lot (formerly Smith & Sikes), base of sand 3,540 feet, initial production 50 bbls. per hour through open tubing, total depth 3,620 feet. Solar Exploration Co.'s No. 3 J. S. and F. Elder, top sand 3,516 feet, initial production 12 bbls. per hour through three-quarter inch tubing choke, total depth 3,560 feet. Sun Oil Co.'s No. 6 C. Brown, top sand 3,608 feet, initial production 49 bbls. per hour through tapered tubing, total depth 3,670 feet; No. 7 M. T. Cole, top sand 3,520 feet, initial production 65 bbls. per hour through tapered tubing, total depth 3,565 feet.

The Texas Company's No. 5 Baxter, top sand 3,636 feet, initial production 80 bbls. in 50 minutes through open tubing; total depth 3,678 feet. Tidal Oil Co.'s No. 14 R. D. Bivens, top sand 3,594 feet, initial production 80 bbls. per hour through three-quarter inch tubing choke, total depth 3,603 feet; No. 6 Strong, top sand 3,605 feet, initial production 75 bbls. per hour through open tubing, total depth 3,615 feet. Winon Oil Co.'s No. 1 Cumi-Wells, top sand 3,728 feet, initial production 100 bbls. per hour through open tubing, total depth 3,730 feet. Wyche Brothers' No. 1 Charles Arnold, top sand 3,716 feet, initial production 60 bbls. per hour through 1-inch tubing choke, total depth 3,718 feet.

North Rusk County

Gulf Production Co.'s No. 11 Florence, top sand 3,701 feet, initial production 90 bbls. per hour through three-quarters inch tubing choke, total depth 3,709 feet; No. 9 R. M. Griffin, top sand 3,605 feet, initial production 72 bbls. per hour through three-quarters inch tubing choke, total depth 3,631 feet. Humble Oil & Refining Co.'s No. 3 Thomas Barton, top sand 3,652 feet, initial production 30 bbls. in one-half hour through tubing choke, total depth 3,747 feet; No. 59 L. D. Crim, top sand 3,649 feet, initial production 96 bbls. per hour through three-quarters inch tubing choke, total depth 3,691 feet; No. 2 Ben Peterson, top sand 3,552 feet, initial production 39 bbls. per hour through 1-inch tubing choke, total depth 3,628 feet; No. 1 Oscar Roberson, top sand 3,617 feet, initial productioin 33 bbls. per hour through three-quarters inch tubing choke, total depth 3,717 feet. E. W. Moore's No. 3 W. P. Moore, top sand 3,661 feet, initial production 40 bbls. in one-half hour through open tubing, total depth 3,664 feet. Munn Brothers' No. 1 I.&G.N.R.R., top sand 3,747 feet, initial production 45 bbls. in one-half hour through open tubing, total depth 3,750 feet.

Shell Petroleum Corp.'s No. 11 W. P. Moore, top sand 3,703 feet, initial productioin 15 bbls. in one-half hour, total depth 3,714 feet. Southern Oil Refining Co.'s No. 1 I.&G.N.R.R., top sand 3,664 feet, initial production 50 bbls. in one-half hour through open tubing, total depth 3,670 feet; No. 6 I.&G.N.R.R., top sand 3,722 feet, initial production 90 bbls. in 20 minutes through open tubing, total depth 3,725 feet. Stanolind Oil & Gas Co.'s No. 4 Rena Christian, top sand 3,677 feet, initial production 43 bbls. in one-half hour through 2-inch tubing choke, total depth 3,679 feet; No. 4 W. H. Smith, top sand 3,713 feet, initial production 43 bbls. per hour through 2-inch tubing, total depth 3,715 feet.

South Rusk County

Bristol and Thomas' No. 3 London School, top sand 3,756 feet, initial production 75 bbls. per hour through tapered tubing, total depth 3,801 feet. British-American Oil Co.'s No. 6 Kangerga, top sand 3,629 feet, initial production 140 bbls. per hour through 2½-inch tubing, total depth 3,651 feet. Conservative Oil Co.'s No. 7 Lizzie Harmon, top sand 3,780 feet, initial production 75 bbls. in 45 minutes through 2½-inch open tubing, total depth 3,810 feet.

Dearing & Sons' No. 2 L. L. Jones, top sand 3,789 feet, initial production 42 bbls. per hour through 1-inch tubing choke, total depth 3,795 feet. A. B. Edwards and others' No. 1 E. L. Pinkston, top sand 3,619 feet, initial production 80 bbls. in one-half hour through 2½-inch open tubing, total depth 3,649 feet. R. W. Fair and others' No. 2 Deason, top sand 3,618 feet, initial production 35 bbls. per hour through open 2-inch tubing, total depth 3,698 feet. Golding and Murchison's No. 9 Fair, top sand 3,613 feet, initial production 110 bbls. per hour through 2½-inch open tubing, total depth 3,639 feet.

Gulf Production Co.'s No. 5 A. H. Rayford, top sand 3,735 feet, initial production 70 bbls. per hour through three-quarters inch tubing choke, total depth 3,741 feet; No. 5 A. H. Rayford, top sand 3,735 feet, initial production 70 bbls. per hour through three-quarters inch tubing choke, total depth 3,741 feet; No. 5-A A. H. Rayford, top sand 3,734 feet, initial production 60 bbls. per hour through three-quarters inch tubing choke, total depth 3,739 feet; No. 5 J. W. Shaw, top sand 3,729 feet, initial production 52 bbls. per hour through three-quarters inch tubing choke, total depth 3,734 feet. Humble Oil & Refining Co.'s No. 6-B Blackwell, top sand 3,635 feet, initial production 78 bbls. per hour through three-quarters inch tubing choke, total depth 3,650 feet. Hunt Production Co.'s No. 2-D Bradford, top sand 3,530 feet, initial production 17 bbls. per hour pumping, total

(Continued on Page 39)

East Central Texas Wildcats

Week Ending August 29

Company, well, farm name, section and block—	Remarks:
ANDERSON COUNTY	
Frazier et al's No. 1 H. L. Hudson, 200 ft. from S line and 200 ft. from W line of 196-ac. tract, M. Rionda Sur.	Derrick.
Roesser and Pendleton's No. 1 M. A. Davy, 660 ft. from N line and center of E and W lines of tract and survey, P. G. Adams Sur.	Derrick.
C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S½ of 129-ac. tract, M. Main Sur.	T.D. 1,538 ft.
ANGELINA COUNTY	
Hurlburt et al's No. 1 Long Bell Lumber Co., 160 ft. N and 200 ft. W of SE cor. of survey, H.T.&B. Sur.	Rig up.
Waltman et al's No. 1 L. J. Dearman, 350 ft. from S and W lines of 20-ac. tract, J. T. Peavy Sur.	Derrick.
BOWIE COUNTY	
Roy Anderson's No. 1 Dykes, 2 miles W of Texarkana, M. Dykes Sur.	Drlg. 1,875 ft.
Burnham-Robertson and Greer's No. 1 F. O. Weiss, 850 ft. from N line and 200 ft. from W line of B. H. Williams 50-ac. tract, Jessie Dean Sur.	S.D. 3,727 ft.
CHEROKEE COUNTY	
Barkley Tate et al's No. 1 H. E. Neal, 330 ft. from N and W lines of tract, J. M. Prosella Sur.	Derrick.
Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	S.D. 1,000 ft.
Davis et al's No. 2 Annie Kelly, 631 ft. W of No. 1, M. De Los Santos Coy Sur.	Derrick.
Marr Drilling Co. and Stanolind Oil & Gas Co.'s No. 1 Green, 1,264 ft. from S line and 1,450 ft. from W line of lease, A. D. Kelker Sur.	Rig up.
Mid-Kansas Oil & Gas Co.'s No. 2 J. A. Layne, 330 ft. from N and E lines of lease, M. D. L. S. Coy Sur.	Derrick.
Mid-Kansas Oil & Gas Co.'s No. 4 H. D. Kelly, 330 ft. from S line and 1,875 ft. from E line of lease, M. D. L. S. Coy Sur.	Testing 3,694 ft.
Pure Oil Co.'s No. 1 W. B. Nicholson, 300 ft. from S and E lines of 72-ac. tract, R. Stewart Sur.	Location.
William A. Stone's No. 1 J. T. Perkins, 200 ft. from NW cor. of lease, Thomas Stanford Sur., 8 miles S of Ponta	Coring 2,958 ft.
Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur.	S.D. 3,170 ft.
DELTA COUNTY	
Commerce Oil Co.'s No. 1 Ablowich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 52-ac. tract, E. Chick Sur.	S.D. 3,813 ft.
Joiner et al's No. 1 Blackwell, 800 ft. S and 150 ft. from E lines of 275-ac. tract, Dunnetelle Sur.	S.D. 3,150 ft.
ELLIS COUNTY	
Armstrong's No. 1 Milton Cook, SE cor. of 50-ac. tract, S. Frederick Sur.	Drlg. 3,183 ft.
Armstrong Bros.' No. 1 Reeves	Waiting on cmt. to set 100 ft.
Armstrong Bros.' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur.	S.D. 1,435 ft.
Clark Brooks' No. 1 Anderson, SE cor. of 3,900-ac. tract, 10 miles SW of Wachatchie, E. C. Branch Sur.	S.D. 650 ft.
Paris Oil Co.'s No. 1 O. S. Bain, 1,500 ft. from S line and 300 ft. from W line of 60-ac. lease, R. M. Williams Sur.	Drlg. 650 ft.
FRANKLIN COUNTY	
Tom Harper's No. 1 fee, 150 ft. from N line and 200 ft. from E line of 116-ac. tr., W. M. Dawson Sur.	Running csg. 3,285 ft.

(Continued on Page 39)

Deep Oil Showing in Northeastern Fisher County; Interesting Developments in Ward County

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 29.—A deep showing of oil in a northeastern Fisher County test, abandonment of a western Ward County wildcat, and drilling into salt water by Renaud & Prettyman's semiwildcat in northern Ward County were the features of the Permian Basin during the week.

Renaud & Prettyman's No. 1 University, interesting test 1¼ miles south of the nearest producer of the Edwards-O'Brien-Hutchings Pool, northern Ward County, which has been flowing about 4 bbls. per hour while drilling deeper, after topping the pay at 2,685-88 feet, encountered one-quarter of a bailer of salt water per hour from 2,760-63 feet. Water will be plugged off and the well completed at its present depth of 2,763 feet.

Plains Production Co. and Simms Oil Co.'s No. 1 Benton land, in Section 26, Block 1, W.&N.W. Survey, an interesting wildcat test 2 miles north of the Delaware discovery in western Ward County, and lying in a trend between the Wheat Pool, Loving County, to the north, and the discovery well to the south, is now shut down at 4,825 feet with orders to plug, precluding the possibilities of trying to join the two areas which are 13 miles apart. One other test is drilling in the area for this new Ward County pay, from which production comes in the Wheat Pool.

Fisher County

Cranfill & Reynolds' No. 1 George, located in Section 200, B.B.B.&C. Survey, northeastern Fisher County, which made but a small producer in the regular pay in this area, and which has been drilling deeper in hopes of picking up a deep pay, encountered a showing of high gravity oil this week from 6,054-58 feet and is now shut down for 3-inch casing. Top of the pre-Mississippian was claimed to have been logged at 6,036 feet, but as samples from the test have not yet been checked under a miscroscope, nothing definite can be told as to the formation.

The deep showing has created considerable interest in the test, which will be drilled deeper after casing is set. This is the deepest showing of oil yet found in the county, or for this part of the West Texas district.

H. W. Martin and others' No. 1 Brookfield and others, wildcat test 3 miles

Wheat Pool

north of the Wheat Pool, Loving County, which had a showing of oil from top of Delaware sand, 4,746 feet to 4,850 feet, and an estimated 1,000,000 feet of gas from 4,776-78 feet, is to be given a shot in an effort to make a producer out of it. Five hundred and thirty quarts will be detonated between 4,715 and 4,815 feet. At present the well is standing with 5,000 feet of oil in the hole, and looks practically sure of making a producer. It is located in Section 30, Block 29, N.&N.W. Survey.

Gaines County

McElreath & Suggett's No. 1 J. A. Sparks, located in the northeast corner of Section 397, Block G, C.C.S.D.&R.G.N.G. Survey, interesting Gaines County wildcat, encountered sulphur water from 4,755-60 feet, and is shut down pending an analysis of the water before drilling deeper. It formerly tested around 52,000 feet of gas at 3,110 feet, and drilled solid gray lime from 4,495 feet.

Three men on the drilling crew of the Penn Oil Co. which is drilling No. 1 York, in Section 10, Block 34, H.&T.C. Survey, southern Ward County, between the Penn-Atlantic-Bennett wells and Bradford's No. 1 Hardage and Wilson producer, were badly injured when gas in the test ignited and burned down the rig. Tools were formerly blown up the hole when an increase in gas was struck at 2,268 feet, and it was while repairing the rig that the accident occurred.

Glasscock County

Sun Oil Co.'s No. 2 Phillips, in Section 14, Block 33, Township 2s, T.&P. Survey, Glasscock County, has been drilled deeper from its former total depth of 2,260 feet, to a new total depth of 2,335 feet, encountering an increase in oil between 2,319 and 2,335 feet, and recompleted for an initial production of 660 bbls. Five and three-sixteenths-inch casing with a packer, was set at 2,315 feet to shut off upper oil and water.

Reagan County

The attorney general has received requests for institution of several lawsuits against the companies operating in the Big Lake Field, after a meeting of the University of Texas board of regents at a recent meeting. The requests have been assigned to two assistants in the department who will recommend suitable action following a study of the arguments in the regents' request. Judge R. L. Batts, chairman of the board of regents, brought up the question of gas production in the field, and its value, citing how much the gas would have brought in Austin, several hundred miles distanct if it had been sold in that city. Suits asked by the judge will deal with fixing the gas-oil ratio for the field, will consider if the university is being properly paid for the gasoline produced in the field; for royalty not paid, and for royalty only partially paid on gas sold; will consider recovery of gas used in producing oil, and then blown or burned in the air; and suit for gas used in excess of that required for lifting of oil, in case it should be determined that the lessee may use, without cost to itself, all of the gas necessarily used in the production of oil. Companies in the field have cut down production in their deep wells to the danger point in order to conserve gas and oil, and are at present experimenting with other methods for choking down the wells and conserving the gas.

Runnels County

M. Z. Dibble and the Danciger Oil & Refining Co. of Fort Worth, have staked location for a test 1,000 feet from the Blue Bonnet Petroleum Co.'s No. 1 R. M. McMillan, Runnels County's latest producer. The test will be on the R. H. Fowler 80-acre tract in Subdivision 23, Norvel Travis League. The Blue Bonnet well is flowing around 115 bbls. per day by heads. Corrected total depth is 2,520 feet, or 2 feet less than first reported. It has just been cleaned out and slightly deepened, increasing production.

Ranger and Wichita Falls

Scott, Anderson and Brown have staked location 2 miles southeast of Comyn, on the eastern side of Comanche County, for a 3,500-foot Ellenberger test, on a 6,000-acre block. A test was formerly drilled on the Scott and Uterbach tract in the William McClelland Survey, Abstract 642, which had a slight showing of gas in black lime at 3,227-3,437 feet, topping the Ellenberger at 3,528 feet, and having a light showing of oil with some water in brown sandy lime at 3,530-40 feet. It was shot with 80 quarts and again with 410 quarts from 3,540-70 feet, but with no results. The second test will be of exceptional importance due to the showings in the first well, and possibilities considered for the area.

Brown County

If B. D. Thomas and W. J. Dobbs of Dallas drill their recently spudded test on the Alvin Richmond farm in Block 78, Comanche County school lands, to the proposed 6,000-foot level, they will make an exceptionally interesting test for Brown County, one of the few deep tests for the county.

Young County

Three miles northwest of Newcastle in northwestern Young County, Floyd Ard, Jr., and others' No. 1 Routan has apparently opened a new shallow pool, southwest of the Larimore Pool. It logged a sand from 668-80 feet and made an initial flow of 50 bbls.

The Texas Company's No. 1 E. L. Burns, Section 1,986, T.E.&L. Survey, east central Young County, has encountered an important oil show, filling 500 feet with oil while standing at 4,111 feet in brown lime. The first showing was logged at 4,098-4,103 feet, striking an increase at 4,103-11. Top of the Caddo was checked at 4,067 feet, elevation 1,290 feet. The test is in the center of a 2,055-acre block, 3 miles northeast of Bratcher-King Royalty Co.'s No. 1 C. L. Lowe, a recent discovery completed at 3,890 feet. The Texas Company well is probably producing from the same level. Six and five-eighths-inch casing is to be set on top of the oil horizon, and a test made.

Texas State Oil Co.'s No. 1 Shipley, 1 mile west of the Fluhman Pool in Wilbarger County, has swabbed 160 bbls. of oil in 24 hours and showed considerable amount of gas, but when 2-inch tubing was set the well failed to flow. It is bottomed at 1,488 feet. Broken oil and gas sand was logged at 1,443 feet. Elevation is 1,250 feet.

PANHANDLE

The El Bar Corp. has made an important location for its No. 1 Husselby in western Wheeler County in the Panhandle district. It is in the NW Section 70, Block 24, east of the Mid-Kansas Oil & Gas Co.'s No. 1 Webb in Gray County, which was a half mile eastern extension to older production and the farthest east production in Gray County. The El Bar test may connect production between eastern Gray and western Wheeler County, and prove several thousand acres in the latter county. The Mid-Kansas well was completed two months ago for a 240-bbl. production at 2,505 feet.

A gas hearing on the Panhandle situation is to be held in Amarillo on September 1, to discuss plans which have been worked out by committees appointed for that purpose. If no plan is adopted the Railroad Commission may order a shut down until a suitable plan can be devised.

One committee has prepared a plan for the complete unitization of the Panhandle gas field, another with a co-operative system, somewhat of a unitization idea, and a third, for immediate action, does not regard unitization in any form.

Wildcat Operations in West Texas

Week Ending August 29

BORDEN COUNTY

Company, well, farm name, section and block—	Remarks—
Westyde Investment Co.'s No. 1 Looney, 990 ft. from S and E, Sec. 15, Blk. 31, Twp. 4n. T.&P. Sur.	T.D. 845 ft.; underreaming 10-in. csg.

BREWSTER COUNTY

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	S.D. 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	S.D. 1,302 ft.
Joiner's No. 1 McIntire, 853 ft. from S and 2,390 ft. from E. Sec. 31, Blk. 352, W. J. Mitchell Sur.	S.D. 225 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 990 ft. from N and 2,560 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur.	S.D. 2,900 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine	S.D. 1,750 ft.

COCHCO COUNTY

Beasley et al's No. 1 Waring Estate, 400 ft. from N and E. Sec. 163, T.&N.O. Sur.	S.D. 1,700 ft.
Simmons et al's No. 1 Schultz, 150 ft. from W and center N and S of E half of J. Weber Sur., Abst. 154.	Spudded and S.D.

CROCKETT COUNTY

Coleman & Moore's No. 1 Ferner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, L.&G.N. Sur.	Spudded and S.D.
Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,370 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur.	Drlg. 3,206 ft.
The Texas Company's No. 1 B. B. Ingham, 330 ft. from S and 2,330 ft. from E line, Sec. 36½, L.&G.N. Sur.	Drlg. 1,412 ft.; show gas 1,265-75 ft.
J. D. Young Co.'s No. 1 Shannon, 330 ft. from N and W. Sec. 35, Blk. 1, G.C.&S.F. Sur.	Location.

COKE COUNTY

Mid-Kansas Oil & Gas Co.'s No. 1 Hearn, 990 ft. from	

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COMPLETIONS IN WEST TEXAS

Glasscock County

Amerada Petroleum Co.'s No. 4 Coffee, total depth 2,276 feet, plugged back to 2,274 feet, top pay 2,168 feet, initial production 32½ bbls. fluid per hour, 16 per cent water. Sun Oil Co.'s No. 2 Phillips (old well deepened), new total depth 2,335 feet, initial production 660 bbls. per day pumping.

Pecos County

Culberson Brothers Co.'s No. 13-B Monroe, top pay 467 feet, initial production 40 bbls. per day pumping, total depth 469 feet. Steed Production Co.'s No. 5 Tippett, top pay 462 feet, initial production 10 bbls. per day pumping, total depth 511 feet.

Ward County

Abell Brothers' No. 2 Smith, top salt 1,010 feet, top pay 2,331 feet, initial production 70 bbls., total depth 2,386 feet; No. 3 Smith, top salt 1,115 feet, top pay 2,348 feet, initial production 65 bbls., total depth 2,412 feet. Eastland Oil Co.'s No. 1 Green, top salt 1,010 feet, initial production 65 bbls., top pay 2,314 feet, shot 50 quarts 2,325-80 feet, total depth 2,408 feet.

East Texas Fields

(Continued from Page 37)

depth 3,634 feet, Juan Ximenes Survey; No. 8-C R. W. Fair, top sand 3,620 feet, initial production 40 bbls. in one-quarter hour through 2-inch tubing, total depth 3,635 feet; No. 4-C Joe Lee, top sand 3,768 feet, initial production 30 bbls. in one-quarter hour through 2-inch open tubing, total depth 3,770 feet. H. L. Hunt's No. 2 R. J. Vinson, location abandoned.

T. A. Johnson's No. 1 H. B. Leverett, top sand 3,786 feet, initial production 55 bbls. in 30 minutes through 2-inch open tubing, total depth 3,788 feet. Kirby Petroleum Co.'s No. 5 Joe Williams, location abandoned. Mid-Kansas Oil & Gas Co.'s No. 10 H. C. and G. W. Burton, top sand 3,659 feet, initial production 98 bbls. per hour through open 2-inch tubing, total depth 3,711 feet; No. 29 M. M. Cross, top sand 3,609 feet, initial production 80 bbls. per hour through open 2-inch tubing, total depth 3,623 feet; No. 33 M. M. Cross, top sand 3,621 feet, initial production 64 bbls. per hour through open 2-inch tubing, total depth 3,625 feet; No. 36 M. M. Cross, top sand 3,640 feet, initial production 92 bbls. per hour through open 2-inch tubing, total depth 3,650 feet; No. 13 W. T. Grissom, top sand 3,626 feet, initial production 108 bbls. per hour through 2-inch tubing, total depth 3,634 feet; No. 16 W. T. Grissom, top sand 3,622 feet, initial production 30 bbls. in 15 minutes through open tubing, total depth 3,770 feet; No. 18 W. T. Grissom, top sand 3,637 feet, initial production 112 bbls. per hour through open 2-inch tubing, total depth 3,652 feet; No. 5 D. Ledbetter, top sand 3,625 feet, initial production 98 bbls. per hour through open 2-inch tubing, total depth 3,660 feet; No. 8 Ledbeter, top sand 3,660 feet, initial production 98 bbls. per hour through open 2-inch tubing, total depth 3,710 feet.

Sonbar Oil Co.'s No. 6 A. P. Finney, top sand 3,644 feet, initial production 35 bbls. in 30 minutes through 2-inch open tubing, total depth 3,610 feet. Stanolind and Pure Oil Co.'s No. 12 W. H. Siler, top sand 3,650 feet, initial production 43 bbls. in 42 minutes through three-quarters inch tubing choke, total depth 3,673 feet; No. 20 W. H. Siler, top sand 3,593 feet, initial production 43 bbls. in 34 minutes through 2½-inch open tubing, total depth 3,636 feet. The Texas Company's No. 4 Kersh, top sand 3,607 feet, initial production 120 bbls. per hour through open 2-inch tubing, total depth 3,615 feet. Wenable-Rease and McClannahan's No. 3 Flannigan, top sand 3,618 feet, initial production 80 bbls. in 30 minutes through 2-inch open tubing, total depth 3,648 feet. Watson and Butler's No. 1 G. W. Tipps, location abandoned.

Smith County

W. B. Hinton's No. 8 Mayfield, top sand 3,824 feet, initial production 60 bbls. per hour through 1-inch tubing choke, total depth 3,825 feet. Lucas and Hobbs' No. 2 L. S. Sartain, top sand 3,772 feet, initial production 46 bbls. in 20 minutes through open 2-inch tubing, total depth 3,773 feet. McMahon-Moore and McCulloch's No. 6 Cooke, top sand 3,721 feet, initial production 130 bbls. per hour through open 2-inch tubing, total depth 3,728 feet. McMurray Brothers' No. 1 Frank Cole, top sand 3,736 feet, initial production 48 bbls. in 50 minutes through 2-inch open tubing, total depth 3,740 feet.

Upshur County

Alma Petroleum Co.'s No. 5 J. L. Younce, top sand 3,649 feet, initial production 44 bbls. in 45 minutes through 1-inch open tubing, total depth 3,663 feet. W. T. Neilon and others' No. 1 J. P. Lynch, top sand 3,676 feet, initial production 25 bbls. per hour through 2½-inch open tubing, total depth 3,680 feet. Simms and Buttram's No. 11 Nicholson, top sand 3,643 feet, initial production 80 bbls. per hour through 2½-inch open tubing, total depth 3,648 feet. H. K. Spear's No. 1 D. Bruner, dry and abandoned, total depth 3,807 feet. Steen Drilling Co.'s No. 4 A. R. Loden, top sand 3,672 feet, initial production 75 bbls. per hour through 1-inch tubing choke, total depth 3,709 feet. Sun Oil Co.'s No. 7 J. Hargroves, top sand 3,703 feet, initial production 40 bbls. per hour through tapered tubing, total depth 3,705 feet; No. 3 Watkins, top sand 3,674 feet, initial production 17 bbls. per hour through tapered tubing, total depth 3,700 feet.

Van Zandt County

Humble Oil & Refining Co.'s No. 3 L. V. Freeman, initial production 46 bbls. first 24-hour gauge after choked for proration, total depth 2,942 feet. Pure Oil Co.'s No. 4 R. A. Howell, initial production 255 bbls. per hour first hour gauge after choked for proration, total depth 2,964 feet.

Synthetic Resinous Protective Coatings

(Continued from Page 34)

wholly or partly of wood in which the original cost of the wood is small compared with the value of the finished article or where the cost of replacing is high.

Vinyls

This product is produced in the form of polymerized vinyl chloride or vinyl acetate or a mixture thereof. It produces a film which form the standpoint of weather resistance apparently is more durable than practically any other colorless type of film experimented with. It may be pigmented for the production of opaque coatings. It is transparent to ultra violet light and, therefore, resists the breaking down which occurs with many other products such as certain cellulose esters and some oil varnish compositions which do not satisfactorily transmit ultra violet radiation.

These products are known today more widely in foreign countries than in our country, but we can expect their development here. There are a number of vinyl compounds, the best known of which are vinyl chloride and bromide, vinyl acetate and vinyl benzine, the latter more commonly known as steyrene. These substances are initially volatile liquids, but undergo polymerization under the influence of certain catalysts, the form products varying from soft liquids to hard brittle solvents.

The basis for the preparation of the vinyl compound is acetylene gas or ethylene contained in natural gas which is available in large quantities in West Virginia and other fields throughout the United States. The literature reveal proposed methods for the preparation of these products. Since they dry by evaporation rather than oxidation they naturally would be expected to have longer life than some products which dry through oxidation and gradually fail by super oxidation. It was found difficult to secure good coating compositions from them as the film either dried too soft due to a high content of the low molecular weight polymers, or became too brittle as the other extreme. However, there are available today coatings which will find their widest application where abnormal chemical resistance is required. Coatings are being manufactured which offer protection even where high concentrations (15 to 20 per cent) caustic soda or sulphuric acid are encountered.

Conclusion

Artificial or synthetic resins will eventually produce the "fool-proof" coating which will dry so fast as not to be washed off by a sudden rainstorm as in the use of slow drying linseed oil or oleoresinous coatings; nor be possibly affected by frost or moisture immediately after application.

The finishes will be more durable, retain their gloss, prevent fading of colors, etc. From now on we may expect much better, more economical and uniform coatings made in part or whole from chemicals through synthesis.

It appears, therefore, that the resins selected for a protective coating must depend upon the characteristics and physical properties desired.

We are truly in the era of synthetics.

Miss Oriskany Pay in Hebron Township Test in Potter County, Pa.

COUDERSPORT, Pa., Aug. 27.—The next completion in the Hebron gas field, in western Potter County, is expected to be Robert Hungiville and others' No. 2 Booth, in Hebron Township, on the lease on which the discovery well was drilled by the same operators. It was reported drilling at 4,165 feet when the well was last visited.

The Allegany Gas Co.'s No. 1 Matteson in Hebron Township, failed to find Oriskany sand, the Hebron gas pay, at 5,500 feet. It was drilling in lime at that depth and will test out the lower horizons in the hope of finding a Medina sand pay. The same company's deep test on the Emporium Lumber Co.'s land in the East Fork district is now at 6,040 feet. It has been necessary to cement the hole every 35 or 40 feet in recent drilling and the test therefore has been proceeding slowly.

The Allegany Gas Co. is reported to have made a location on the Andrew Carpenter farm, 400 feet or more west of the Williamsport Natural Gas Co.'s No. 1 Nugent-McGraw, which was a big gasser.

Morrow, McGraw & Metzger were drilling below 2,250 feet on the Smith-Cole farm.

Near Andrews Settlement Hammondsport Natural Gas Co.'s No. 1 W. L. Gale is drilling. A belated report on the depth of the well put it at 675 feet, but it should be much deeper by this time.

G. K. Rogers and others' No. 1 E. M. Clair was reported drilling at 2,920 feet.

The Tioga Realty & Development Co.'s No. 1 E. A. Coyle is drilling around 500 feet.

G. H. Schrack, owner of one of the three big gassers in the Hebron Field, has made location for No. 2 on the Tassell farm. Derrick is being built and drilling should commence soon.

Over the New York state line in Allegany County, the Belmont Quadrangle Drilling Co. is drilling a test for gas on the Ballard-Hassard farm near Richburg. It is now 2,200 feet deep. The well is attracting much attention. Near Alfred, Allegany County, Randolph and others' No. 1 C. A. Rutter is drilling below 2,050 feet.

The Whittmer Oil & Gas Co. is drilling at 3,610 feet on the Warner farm, 6 miles northwest of Greenwood, in western Steuben County, New York.

A. R. JAMESON DIES

A. R. Jameson, aged 38 years, Oklahoma and Texas oil man who formerly lived in Fort Worth, died August 25 of acute appendicities in Oklahoma City. He was president of the Jameson-Grimes Oil Co., Inc., and secretary-treasurer of the Grison Oil Corp. He is survived by his wife, parents and four brothers and two sisters.

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ending August 27 follow:

	Bbls.
WYOMING	
Salt Creek	18,920
Big Muddy	1,660
Badger Basin	50
Byron-Garland	1,100
Dallas Derby	440
Dutton Creek	80
Elk Basin	570
Ferris	50
Frannie	150
Grass Creek	4,050
Greybull	0
Hamilton Dome	860
Hudson	430
LaBarge	930
Lance Creek	70
Lost Soldier	2,610
Mule Creek	0
Midway	100
Notches	0
Oregon Basin	90
Osage	760
Pilot Butte	30
Rex Lake	0
Rock River	970
South Casper	0
Poison Spider	80
Teapot	20
Warm Springs	20
Total Wyoming	34,040
MONTANA	
Buckley-Border	560
Cat Creek	890
Dry Creek	750
Kevin-Sunburst	4,140
Lake Basin	40
Pondera	1,070
Total Montana	7,450
COLORADO	
Florence	270
Fort Collins and Wellington	720
Iles Dome	580
Moffat	630
Orchard	220
Rangely	90
Tow Creek	260
Total Colorado	2,770
NEW MEXICO	
Artesia	510
Caprock	767
Hogback	410
Jal	939
Rattlesnake	700
Table Mesa	50
Eunice	505
Hobbs	25,023
Lea	2,195
Texas-Pacific	97
Total New Mexico	31,196
Total Rocky Mountain area	75,456
Total previous week	75,776
Difference	320

MERCON BROADENS ITS LINE

The Mercon Regulator Co., 1 LaSalle Street, Chicago, which formerly manufactured constant flow regulators, flow limiting regulators, and proportioning regulators for the more general applications involving fluid mixing problems, has extended its line to include regulators for maintaining proportional flow of liquids where the two liquids do not mix or if mixing may do so at process points remote from the point of desired control.

East Central Texas Wildcats

(Continued from Page 37)

FREESTONE COUNTY

Clyde Creighton's No. 1 Holley Bros., 854 ft. from W line and center of N and S lines of lease, A.B.M. Sur. ..... S.D. 1,841 ft.

GREGG COUNTY

Arkansas Fuel Oil Co.'s No. 1 E. Killingsworth, 330 ft. from N and W lines of lease, William Robinson Sur. ..... Location.

Bishop Corp.'s No. 1 J. H. Thomas, 330 ft. from W line of lease and S offset to Flannigan and Brazeil's No. 1 Thomas, H. F. Rodgers Sur. ..... Rig up.

Calaco Oil Co.'s No. 1 Wash and S. Vaultz, 300 ft. from S line and 115 ft. from E line of lease, G. F. Penn Sur. ..... Drlg. 3,270 ft.

Tom Carter's No. 1 George Anderson, 250 ft. SE of East Texas Loan & Investment's No. 3 Anderson, C. H. Alexander Sur. ..... Location.

Chapman-Thomas et al's No. 1 J. H. Gage, 290 ft. W and 170 ft. S of most easterly NE cor. of T. L. Gray lease, H. R. Hokit Sur. ..... Drlg. 1,005 ft.

Corbin et al's No. 1 A. H. Tubbs, 330 ft. from S and W lines of 50-ac. lease, D. Sanches Sur. ..... Derrick.

J. E. Davant's No. 1 Rowland, 180 ft. W and 450 ft. S of SW cor. of Magnolia's Roland lease, M. V. Winkle Sur. ..... Testing 3,580 ft.

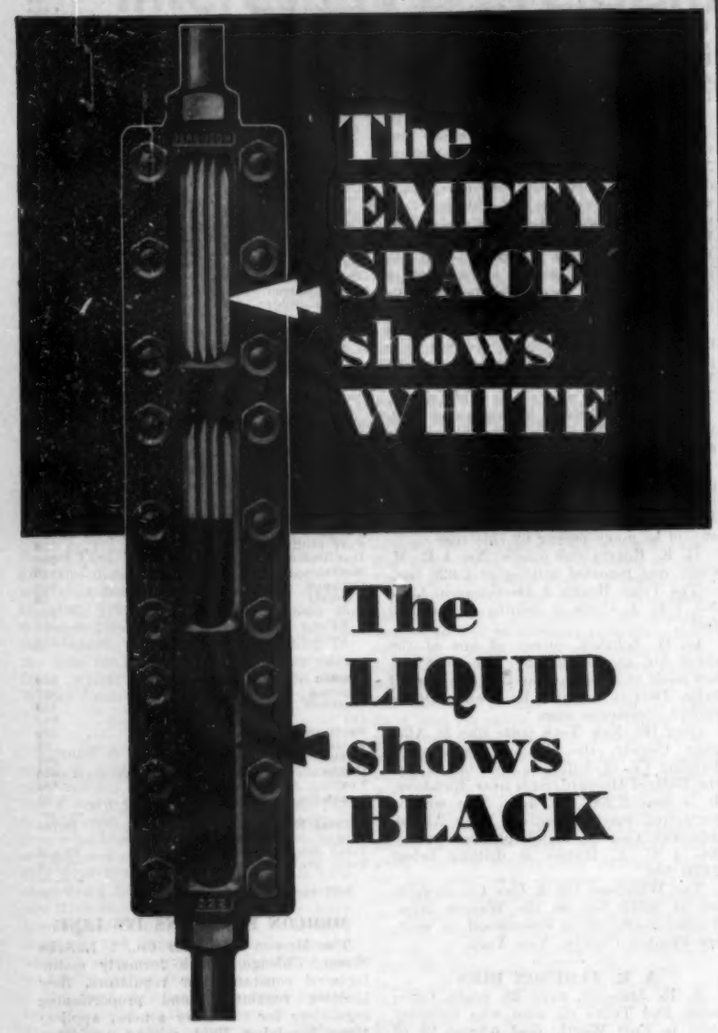
W. R. Dearing & Son's No. 1 Ben Beam, center of 1-ac. tract, M. V. Winkle Sur. ..... Location.

East Texas et al's No. 1 Hindman, center of 2½-ac. lease, G. W. Hooper Sur. ..... Waiting on cmt. to set 3,610 ft; T.D. 3,684 ft.

Fines Oil Co.'s No. 1 Phil Barton, 1,000 ft. N of Magnolia Rollin, most northerly NE cor., M. V. Winkle Sur. ..... Drlg. 1,900 ft.

F. E. Flannery's No. 1 M. T. Cole, 330 ft. from W line and center of N and S lines of 10-ac. lease, E. M. Bramlett Sur. ..... Rig up and S.D.

This gage shows in *BLACK* and *WHITE*



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SOMERVILLE, MASS.

Lewis Godlin's No. 1 E. L. Walker, 230 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur. . . Derrick.
Guinn Petroleum Co.'s No. 1 J. S. and F. Elder, 200 ft. NE of Solar's No. 1 Elder, and 450 ft. SE of Martin's No. 1 Elder, M. V. Winkle Sur. . . . . Rig up.
W. A. Hudson et al's No. 1 J. W. Akin, 133 ft. from N line and 330 ft. from W line of lease, W. H. Castleberry Sur. . . . . Derrick.
Humble Oil & Refining Co.'s No. 1 W. C. Shoultz, 330 ft. from N and W lines of 119-ac. lease, S. S. Davis Sur. . . . . Derrick.
Idaho Oil Co.'s No. 1 T. B. Harris, 40 ft. from N and S lines and 330 ft. from W line of lease, W. H. Castleberry Sur. . . . . Drlg. 1,600 ft.
F. C. Jones et al's No. 1 C. L. Taylor, center of 1 9/16-ac. lease, W. H. Castleberry Sur. . . . . Rig up.
S. J. Jordan's No. 1 E. L. Walker, 660 ft. W of SE cor. of lease and 155 ft. from S line and 156 ft. from river, E. A. Lambert Sur. . . . . T.D. 2,600 ft.
Rodger Lacy's No. 1 fee, 300 ft. NW of No. 2 and 75 ft. W of road, M. V. Winkle Sur. . . . . Testing 3,590 ft.
C. H. Lyons' No. 1 F. J. Richards, 227 ft. from N line and 131 ft. from W line of lease, M. V. Winkle Sur. . . Derrick.
John Mabee's No. 1 Whitehurst, 330 ft. from S and W lines of lease, McKinley and Williams Sur. . . . . Drlg. 2,830 ft.
Magnolia Petroleum Co.'s No. 1 Mary Goyne, 330 ft. from N line and 369 ft. from E and W lines of 29.45-ac. lease, J. Blair Sur. . . . . Rig up.
Magnolia Petroleum Co.'s No. 1 M. Andrews, 330 ft. from N line and 368 ft. from E line of lease, J. Blair Sur. . . . . Rig up.
Marine Oil Co.'s No. 1 W. N. Bradley, W offset to Marine's No. 1 Richey, William Carlton Sur. . . . . Location.
Martin Wood Oil Co.'s No. 1 Nanny E. Walker, 94 ft. from N line and 85 ft. from W line of 84-ac. lease, M. Dillard Sur. . . . . Running csg.; T.D. 3,611 ft.
McBride et al's No. 1 Tubbs, 330 ft. from N line and center of E and W lines of 6-ac. lease, D. Sanches Sur. . . . . Derrick.
J. B. Patty et al's No. 1 Farrell, 330 ft. S and 175 ft. W of NE cor. of E 50 acres of 148-ac. tract, D. Sanches Sur. . . . . Location.
J. B. Patty et al's No. 1 J. C. McCormick, 207 ft. SE at right angles of Gladewater-Tyler road and 540 ft. SW of Abernathy and Kirkpatrick's No. 1 Gregston, M. Dillard Sur. . . . . Top sand 3,596 ft.; rigging up pumping rig; T.D. 3,617 ft.
E. A. Payne et al's No. 1 R. M. Woods, 20 ft. from S line and 31 ft. from W line of 2.13-ac. lease, H. R. Hokit Sur. . . . . Derrick.
V. J. Pearson's No. 1 R. Lacy, 90 ft. from S and W lines of Blk. No. 1, M. V. Winkle Sur. . . . . Waiting on cmt. to set.
E. J. Raddatz' No. 1 Sabine River, 330 ft. from W line of lease, 368 ft. NW of Sinclair's No. 2 A. A. King, State Land Sur. . . . . Running csg. 3,540 ft.
J. J. Roberts' No. 1 H. S. and F. Elder, 90 ft. from SW line and 90 ft. from E line of 1-ac. lease, M. V. Winkle Sur. . . . . Swabbing 3,585 ft.
Russell Petroleum Co.'s No. 1 M. T. Cole, 330 ft. from S and E lines of survey, J. A. Duncan Sur. . . . . Set surface csg.
Solar Exploration's No. 1 M. E. Church, 150 ft. from N line and 50 ft. from E line of NW cor. of Blk. No. 169, M. V. Winkle Sur. . . . . Location.
South Gulf Production Co.'s No. 1 Cemetery, 225 ft. NW of Barnsdall's No. 1 McGrede, on one-half acre lease, D. Sanches Sur. . . . . S.D. 200 ft.
Sowell et al's No. 1 M. S. Strong, 330 ft. from S line and center of E and W lines of 13.53-ac. tract, G. F. Penn Sur. . . . . Derrick.
Stewart and Duffy's No. 1 R. M. Spear, 150 ft. SE of Blk. No. 168 . . . . . Location.
Sun Oil Co.'s No. 1 T. J. Pressley, 330 ft. from N and W lines of lease, M. Alexander Sur. . . . . Drlg. 311 ft.
W. C. Turnbow, trustee's No. 1 J. N. Dixon, 330 ft. from E line of lease and 477 ft. N of Alexander and Rasmussan's No. 1 Dixon, I. Beaty Sur. . . . . Drlg. 3,664 ft.
W. C. Turnbow's No. 1 Knowles, W. offset to Everts' No. 2 Barton, W. V. Winkle Sur. . . . . T.D. 3,585 ft.; testing; will not flow.
J. C. Vernon's No. 1 Cemetery, N offset to Welch and Sandler's No. 1 Barnett, T. Johnson Sur. . . . . Set surface csg.
J. Zeppa, trustee's No. 1 Hughey-Ross, 1,750 ft. S and 215 ft. E of NE cor. of John Moffitt Sur., W. P. Chisum Sur. . . . . Drlg. 2,428 ft.

HENDERSON COUNTY

B. L. Green et al's No. 1 M. H. Gussett (old well drilled deeper), 150 ft. from N line and 1,000 ft. from W line of 105.5-ac. tract, 3 miles SW of Mabank, L. D. Stover Sur. . . . . S.D. 3,147 ft.
Dr. J. T. Kennon et al's No. 1 Rowe & Baker, 1,320 ft. from N line and 150 ft. from W line of survey and tract, Josiah T. Childress Sur. . . . . Spudded.
H. H. Meyer's No. 1 M. E. Olson, 2 miles S of Brownsboro tract in NW cor. of survey, George Wilson Sur. . . . . S.D. 2,470 ft.
C. W. Murchison et al's No. 1 S. G. Benton, 360 ft. from S line and 330 ft. from E line of lease, 5 miles NE of Athens, B. G. Reynolds Sur. . . . . Derrick.

HILL COUNTY

Sherman-Houseman's No. 1 J. F. Griffith, in Samuel Waddell Sur. . . . . Fishing 3,256 ft.
T. J. Spikes' No. 1 M. H. Davis, 150 ft. from S and E lines of 55-ac. tract, H. R. Alexander Sur. . . . . Location.

HOPKINS COUNTY

Columbia Oil & Gas Co.'s No. 1 McCloud, 150 ft. from S line and 200 ft. from E line of lease, Holbrook Sur. . . . . Derrick.
Roark et al's No. 1 Taylor, 230 ft. from N and W lines of 50-ac. tract, in the John Polk Sur. . . . . S.D. 540 ft.

HUNT COUNTY

Chandler et al's No. 1 Mrs. A. Walker, 200 ft. from S line and 500 ft. from W line of most southerly SW cor. of tract and survey, J. P. Bowerman Sur. . . . S.D. 3,171 ft.

KAUFMAN COUNTY

Standy Darnell et al's No. 1 Sally Pannill . . . . . S.D. 2,485 ft.

LAMAR COUNTY

G. W. Davy et al's No. 1 McGustion, 450 ft. from S line, 450 ft. from W line of farm and survey, Galet Wood Sur. . . . . Temp. abnd. 3,605 ft.
Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. . . . . S.D. 2,446 ft.

LEON COUNTY

Alladay et al's No. 1 W. R. Thompson, 330 ft. from N line of survey and 330 ft. from E line of 98-ac. tract, N. M. Allen Sur. . . . . Spudded.

MORRIS COUNTY

Joiner & Harris Drilling Co.'s No. 1 Clayton Brown, 1,635 ft. N of most easterly SW cor. of survey, William M. Coffey Sur. . . . . Derrick.
Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 65.5-ac. tract, J. D. Nelson Sur. . . . . S.D. 3,554 ft.

POLK COUNTY

Cannon et al's No. 1 Roberts, 10 miles N of Livinston, Romera Sur. . . . . Rip up and S.D.

RED RIVER COUNTY

Concord Oil Co.'s No. 1 J. R. Dallahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. . . . . Reaming 2,545 ft.

ROCKWALL COUNTY

Buccaneer Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 130 ft.

RUSK COUNTY

Acme Oil Co.'s No. 2 Andy Givens, 150 ft. from W line and center of N and S lines of 2-ac. lease, R. E. Winn Sur. ..... Drlg. 3,128 ft.

Brooks Petroleum Co.'s No. 1 Mayfield, Daniel Clark Sur. ..... Top sand 3,622 ft.; waiting on standard rig; would not flow; T.D. 3,702 ft.

T. E. Castle's No. 1 R. H. Gary estate, 3,960 ft. from N line and 5,280 ft. from W line of survey, 10 miles S of Henderson, A. Latham Sur. ..... Drlg. 3,370 ft.

Daisy Oil Co.'s No. 1 C. Young, 330 ft. N and 330 ft. E of SE cor. of Sun's Selman lease, M. J. Pru Sur. ..... Prepare to spud.

Falcon Oil Co.'s No. 1 P. S. Tipps, 135 ft. from N line and 110 ft. from E and W lines of 1.69-ac. tract, W. J. Roane Sur. ..... Drlg. 2,580 ft.

Granver Oil Co.'s No. 1 Beasley, S offset to Everts Drilling Co.'s No. 1 Beasley, T. C. Lloyd Sur. ..... Drlg. 2,849 ft.

J. Guinn's No. 1 Neal Cooper, center of Blk. No. 36, T. J. Moore Sur. ..... Waiting on standard rig; T.D. 3,660 ft.

Gulf Production Co.'s No. 1 Bator, S offset to Humble's No. 3 Peterson, Mary Cogswell Sur. ..... Rig up.

Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. ..... Derrick.

Hart Petroleum Co.'s No. 2 J. R. Alford, center of Blk. No. 32, T. J. Moore Sur. ..... Drlg. 750 ft.

Hasting and Dodson's No. 1 E. B. Alford, center of Blk. No. 27, T. J. Moore Sur. ..... Derrick.

Hathaway et al's No. 1 Gray, J. M. McLain Sur. ..... S.D. 3,640 ft.

Heiden-Rodgerson et al's No. 1 Barton and Birdwell, N offset to Reisinger et al's No. 1 Barton, W. G. Tutt Sur. ..... Fishing for tubing; T.D. 3,792 ft.

J. Jeagens' No. 1 Needham, 330 ft. from N line of lease and 330 ft. from NE and 400 ft. from SE of survey, J. H. Chambers Sur. ..... S.D. 447 ft.

W. C. Know's No. 1 W. D. Peterson, center of 3.75-ac. tract, Jacob Lewis Sur. ..... S.D. 2,200 ft.; rig moved off.

Louisiana Oil & Refining Co.'s No. 1 H. Kersh, 330 ft. from N and E lines of 80-ac. lease, Jos. McAllister Sur. ..... Derrick.

Marr Drilling Co.'s No. 1 John Retting, 330 ft. from N line and 1,650 ft. from E line of tract, J. H. Sparks Sur. ..... Drlg. 3,644 ft.

Merrick Drilling Co.'s No. 2 George Thompson, 150 ft. from S line and 216 ft. from W and E lines of 10-ac. lease, H. Hobson Sur. ..... S.D. 3,585 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 Peter Tipps, 330 ft. from N and W lines of lease, Peter Tipps Sur. ..... Drlg. 3,300 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 M. A. Price, 210 ft. from N line of road and 330 ft. from W line of lease, J. B. de Cadena Sur. ..... Drlg. 3,075 ft.

Murray Oil Co.'s No. 1 H. Sexton, center of 3-ac. lease, being center of 3-ac. of 10-ac. strip, M. McCabe Sur. ..... Derrick.

Overton Refining Co.'s No. 1 J. W. Key, 330 ft. from E line and center of N and S lines of 8.6-ac. tract, J. Lindley Sur. ..... Waiting on cmt. to set 3,755 ft.; T.D. 3,763 ft.

Pierce and Moore's No. 1 Terrell, E offset to Sun's No. 2 Barker, E. G. Sevier Sur. ..... Drlg. 2,325 ft.

Pointer and Duncan's No. 1 Hale, center of 1-ac. gin lot, John Darley Sur. ..... Rig up.

D. C. Reed et al's No. 1 M. L. Thompson, 35 ft. from N line and 150 ft. from W line of lease, F. Cordova and M. J. Pru Sur. ..... Location.

W. F. Reynolds' No. 1 H. Stoddard, 330 ft. from S line of road, 220 ft. from N line of lease, and 330 ft. from W line of Creek, Juan Ximenes Sur. ..... Rig up.

Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. ..... S.D. 3,430 ft.

Snider and Spradner's No. 1 Brightwell, 650 ft. from S line and 150 ft. from W line of lease, R. W. Smith Sur. ..... Rig up.

Stewart and Duffy's No. 1 Solar Jackson, 320 ft. from N and E lines of lease, P. W. Holmes Sur. ..... Derrick.

Talbert, trustee's No. 1 Maxwell, 150 ft. from most northerly S line and 150 ft. from most northerly W line of lease, I. G. Parker Sur. ..... Drlg. 2,585 ft.

Torrance and DePrang's No. 1 Johnson, 18 ft. W and 362 ft. N of NW cor. of Stanolind's Christian tract, W. R. Cooke Sur. ..... Drlg. 3,225 ft.

R. H. Vice's No. 1 Neal Cooper, 315 ft. SW along NW line of Cooper tract and 141 ft. SE at right angles, T. J. Moore Sur. ..... Waiting on standard rig 3,797 ft.

R. H. Vice's No. 1 Alford, 152 ft. from N line of lease and 660 ft. W of O'Neal's No. 1 Alford, H. B. Dance Sur. ..... Drlg. 3,059 ft.

Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..... S.D. 1,465 ft.

SMITH COUNTY

Perry Allen et al's No. 1 T. O. Wright, 250 ft. from E line of lease and 200 ft. N of Witherspoon's No. 1 Wright, J. Vargus Sur. ..... Spudded.

Cockburn and Hooper's No. 1 Lula Jackson, 330 ft. from E line and center of N and S lines of 27.8-ac. tract, E Daniels Sur. ..... Waiting on cmt. to set; top sand 3,810 ft.

Golden Eagle Oil Co.'s No. 1 T. B. Collier, 137 ft. from S line and 150 ft. from E line of lease, J. Jordan Sur. ..... Derrick.

Golden Eagle Oil Co.'s No. 1 E. E. Moore, 330 ft. from N and E lines of 8-ac. lease, Juan Vargus Sur. ..... Derrick.

Golden Eagle Oil Co.'s No. 1 L. S. Sartain, center of 5-ac. lease, J. Jordan Sur. ..... Derrick.

Hooper et al's No. 1 Lula Jackson, 330 ft. S and 530 ft. E of most northerly SW cor. of Monroe Shell Robinson lease, E. Daniels Sur. ..... Drlg. 3,790 ft.

Joiner et al's No. 1 C. S. Jackson ..... T.D. 4,045 ft.; S.D.

McRabie et al's No. 1 C. P. Hamilton, 330 ft. from S and E lines of 255-ac. tract, Jackson Rector Sur. .... Derrick.

Mundt et al's No. 1 W. E. Murray, 330 ft. from S and E lines of lease, 5 miles SE of Tyler, Marshall Wynn Sur. ..... Bldg. derrick.

Rabe et al's No. 1 Bateman, 332 ft. from S line and 278 ft. from E line of 15-ac. lease, James Jordan Sur. ..... Drlg. 2,850 ft.

Sun Oil Co.'s No. 1 Hudnott and Melton, 2,310 ft. from N line and 330 ft. from E line of lease, M. D. L. S. Coy Sur. ..... Location.

Alph Tillman et al's No. 1 Jessie Cole, 137 ft. from E line and 375 ft. from N line of 32-ac. lease, center of 5-ac. lease, James Jordan Sur. ..... Waiting on cmt. to set; T. D. 3,761 ft.

Zion Oil Co.'s No. 1 J. Wilson, 219 ft. from S line and 330 ft. from E line of 10-ac. lease, James Jordan Sur. ..... Drlg. 2,800 ft.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... T.D. 4,212 ft.

UPSHUR COUNTY

Burnham and Johnston's No. 1 G. T. Shelton, 160 ft. from S line of lease and N offset to E. & D.'s No. 2 Free, William King Sur. ..... Running csg.; T.D. 3,741 ft.

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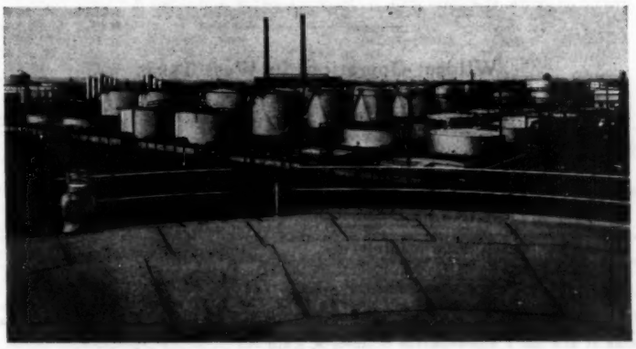

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Cranfill & Reynold's No. 1 Laney Graves, 330 ft. from S and E lines of lease, M. Irwin Sur. ..... Drlg. 2,552 ft.
Everette Oil Co.'s No. 4 A. J. Sanders, 330 ft. from S and W lines of lease, T. Allen Sur. ..... Derrick.
Lewis Golding's No. 1 L. T. Mackey, 1,650 ft. NE along SE line from SE cor. of NW, S. Harrell Sur. ..... T.D. 3,725 ft.
Grover Hart's No. 1 Allen, 330 ft. from S and E lines of lease, one-half mile W of Mountain, Gonzales Sur. ..... Derrick.
Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1½ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. ..... Waiting orders 3,710 ft.
Island Oil Co.'s No. 3 Bonner, center of lease, J. McRae Sur. ..... Waiting on cmt. to set 3,645 ft.
Lester and Duffield's No. 1 L. Graves, 169 ft. N and 330 ft. W of SW cor. of J. McRae Sur., M. Irwin Sur. ..... Top sand 3,645 ft.; T.D. 3,658 ft.
McMurphy's No. 1 E. A. Cobb, 330 ft. from S and E lines of 54-ac. lease, John Lout Sur. ..... Spudded.
Perrin and Fell's No. 1 W. N. Landers, 330 ft. from N line and 1,088 ft. from W of lease, G. W. Hooper Sur. ..... Drlg. 2,130 ft.
Scott & Ashford's No. 1 Duphrates, 772 ft. from N line and 2,805 ft. from E line of lease, Del Torres Sur. ... Drlg. 2,935 ft.
Turnbow's No. 1 D. C. Shelton, center of 2½-ac. tract, Wm. King Sur. ..... Derrick.
Twin Oil Co.'s No. 1 C. J. Markey, 330 ft. from S and E line of lease, J. M. Pineda Sur. ..... Drlg. 2,100 ft.
Wadley-Evans and Lions' No. 1 C. R. Covin, 330 ft. from N line and center of E and W lines of 50-ac. tract, J. Loute Sur. ..... Derrick.
Watson's (formerly Kinsey) No. 1 D. F. Smith, 466 ft. from S line and 1,165 ft. from E line of 266-ac. tract, J. R. Davis Sur. ..... S.D. 1,856 ft.
I. Z. Werby et al's No. 1 Williams, 263 ft. from N line and 243 ft. from W line of 5-ac. tract, McKinley and Williams Sur. ..... Derrick.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 2¾ miles S of Canton, M. J. McCadena Sur. ..... S.D. 2,405 ft.
Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... S.D. 2,300 ft.
Pure Oil Co.'s No. 1 A. E. Ellison, 150 ft. S and E of NW cor. of lease, John Walling Sur. ..... Drlg. plug 2,950 ft.
Pure Oil Co.'s No. 14 R. L. Wells, 500 ft. W of E line and 550 ft. N of S line of lease, Mund Gross Sur. .... Reaming 2,927 ft.
Pure Oil Co.'s No. 3 W. E. Morris, 250 ft. S of N line and 250 ft. E of W lines of lease, John Walling Sur. ..... Location.
Pure Oil Co.'s No. 3 A. R. Humphreys, 675 ft. W of E lines and 225 ft. S of N lines of lease, A. McPhail Sur. ..... Location.
Pure Oil Co.'s No. 4 H. C. Gilbert, 250 ft. N of S lines and 250 ft. W of E lines of lease, Mund Gross Sur. ..... Location.
Pure Oil Co.'s No. 3 B. W. Camper, 250 ft. E of W lines and 250 ft. S of NE cor. of Mrs. C. White 45-ac. lease in John Walling Sur. ..... Location.
A. C. Rowan's No. 1 W. E. Price, 150 ft. from N line and 150 ft. from W line of 28-ac. tract, John Walling Sur. ..... Spudded and S.D.
Roy Stumpff's No. 1 M. I. Riggs, 169 ft. from E line and 250 ft. from S line of tract No. 2 and 320 ft. from E line of lease, 4 miles NE of Van, William Daniel Sur. ..... Derrick.
Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..... T.D. 2,850 ft.

WOOD COUNTY

De Canther's No. 1 N. L. McLain, 350 ft. from N line and 642 ft. from E line of tract, Sam Brooks Sur. ... S.D. 3,344 ft.
W. R. Saulsbury's No. 1 T. H. Peters, 600 ft. from S line and 300 ft. from E line of 320-ac. tract and survey, 4 miles E of Mineola, W. B. McNutt Sur. ... Rig up.
Talko Oil Co.'s No. 1 G. T. Ross, B. L. Smith Sur. ..... Drlg. 3,825 ft.
Wood County Dev. Co.'s No. 1 Davis, approximately 180 ft. from S line of 160-ac. tract and 2½ miles S of Kantes in Sarah McDonald Sur. ..... T.D. 2,660 ft.

Wildcat Operations in West Texas
(Continued from Page 38)

S and W, Sec. 271, Blk. 1-A, H.&T.C. Sur. ..... Drlg. 3,350 ft.

CULBERSON COUNTY

Milton-Dorsey's No. 1 Biggs, 4,181 ft. from N and 150 ft. from E, Sec. 2, Blk. 112, P.S.L. Sur. ..... Location.

DAWSON COUNTY

Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R. Sur. ..... Shut down.

ECTOR COUNTY

Broderick & Calvert's No. 1 Parker, 330 ft. from N and W, Sec. 15, Blk. 44, Twp. 2s, T.&P. Sur. ..... Drlg. 2,300 ft.
Duffey et al's No. 1 Rutledge, 990 ft. from S, 330 ft. from E, Sec. 7, Blk. B-15 ..... Location.
L. C. Harrison et al's No. 1 Addia, 330 ft. from N and 1,320 ft. from W, Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur. .. Drlg. 2,390 ft.
Phillips Pet. Co.'s No. 1 Scharbauer, 990 ft. from S and 330 ft. from W Sec. 43, Blk. 44, Twp. 2s, T.&P. Sur. .. Drlg. 640 ft.
Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 34, Blk. 43, Twp. 3s, T.&P. Sur. ..... S.D. 3,200 ft.
H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur. ..... S.D. 3,505 ft.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, G.F. No. 7,347 ..... S.D. 3,070 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 1 George, 400 ft. from N and 380 ft. from E, Sec. 300, Blk. 1, B.B.B.&C. Sur. .... S.D. 6,058 ft.; to run casing; show oil 6,054-58 ft.
Southern Oil Co.'s No. 1 Purdue, 990 ft. from S and E Sec. 202, Blk. B, B.B.&C. Sur. ..... Drlg. 2,039 ft.

GAINES COUNTY

McElreath et al's No. 1 Sparks, 330 ft. from N and E Sec. 397, Blk. G ..... Drlg. 4,586 ft.

GLASSCOCK COUNTY

California Co.'s No. 1 O'Byrne, 2,310 ft. from S, 1,650 ft. from E, Sec. 23, Blk. 33, Twp. 3-s, T.&P. Sur. ..... Fishing 2,180 ft.
Continental Oil Co.'s No. 2 Hart-Phillips, 660 ft. from N, 1,980 ft. from W, Sec. 24, Blk. 33, Twp. 3-s, T.&P. Sur. ..... T.D. 2,190 ft.; standardizing.
B. C. Mann's No. 1 Moore, C NE. Sec. 11, Blk. 35, Twp 3s, T.&P. Sur. ..... Drlg. 1,963 ft.
Phillips Pet. Co.'s No. 1 Baker, 150 ft. from N and 1,520 ft. from E, Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. ..... Material.
Tribal Oil Co.'s No. 2 Edwards, 2,292 ft. from W and 330 ft. from S, Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur. ... Moving in material.

HOWARD COUNTY

American-Maracaibo's No. 5-A Settles, 1,596 ft. from N, 1,584 ft. from W, Sec. 6, Blk. 32, T.&P. Sur. ..... S.D. 155 ft.
Amerada Pet. Corp.'s No. 5 Coffee, 2,310 ft. from N and 1,650 ft. from W, Sec. 25, Blk. 32 ..... Drlg. 2,260 ft.
Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. . Spudded and S.D.
Merrick & Lamb's No. 4 Chalk, 1,650 ft. from N and 990 ft. from W, Sec. 125, Blk. 29, W.&N.W. Sur. ..... Drlg. 1,645 ft.
Myers et al's No. 1 Denman, 2,305 ft. from S and 2,310 ft. from E Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. .... S.D. 1,930 ft.
McCastin-Smith's No. 1 Roberts, 2,440 ft. from N and 648 ft. from E, Sec. 128, Blk. 29, W.&N.W. Sur. ..... Location.
Pure Oil Co.'s No. 13 Chalk, 330 ft. from N and E, Sec. 125, Blk. 29, W.&N.W. Sur. ..... Location.
Sinclair-Prairie Oil Co.'s No. 3 Dodge, 1,650 ft. from S and 429 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. .. Drlg. 1,090 ft.

IRION COUNTY

Davis et al's No. 1 Sugg, 1,650 ft. from S and 925 ft. from W, Sec. 3,031, Blk. 33, H.&T.C. Sur. ..... Drlg. 8,185 ft.
Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ..... T.D. 6,442 ft.; drlg. plug.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 42.4-acre tract in G. Martinez Sur. ..... S.D. 1,005 ft.; temp. abnd.
Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. ..... Spudded and S.D.
J. M. Johnson's No. 1 Swann, 6,150 ft. from S and 1,550 ft. from E, I. Miley Sur. ..... S.D. 2,527 ft.
Robert Oil Co.'s No. 1 Swann, 2,350 ft. from W and 2,920 ft. from S, I. Miley Sur. ..... T.D. 2,541 ft.; T.P. 2,503 ft.; on pump.
Smart & Reynolds' No. 1 Reynolds, 2,500 ft. from N and 150 ft. from W, Sec. 2, W.T. Scott Sur. No. 3. .S.D. 175 ft.
Southern Oil Co.'s No. 1 Sears, 300 ft. from S and W J. H. Grayson Sur. ..... Drlg. 2,535 ft.
C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 3 ..... S.D. 1,751 ft.
Transcontinental Prod. Co.'s No. 1 Rust, 5,300 ft. N and 995 ft. W of SE cor. J. J. Hughes Sur. 556 ..... Spudded.
Ungren & Frazier's No. 2 King, 465 ft. from N, 150 ft. from E, Subd. 6, M. Bueno Sur. ..... Rigging up.
Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 8, O.A.L. Sur. ..... Location.

LOVING COUNTY

Eppenauer Drlg. Co.'s No. 1 Victor, 2,310 ft. from NE and 330 ft. from SE Sec. 4, Blk. 2, W.&N.W. Sur. ... Spudded and S.D.
Irvin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S, Sec. 46, Blk. 53, T.&P. Sur. ..... S.D. 810 ft.
Fair Lawn Syndicate's No. 1 Brookfield, 330 ft. from N and W, Sec. 30, Blk. 29, P.S.L. ..... T.D. 4,778 ft.; gas at 4,776 ft.; show oil 4,850 ft.
Goldman et al's No. 1 Allen, 330 ft. from NE and NW of Sec. 90, Blk. 1, W.&N.W. Sur. ..... S.D. 3,308 ft.
Goldman et al's No. 2 Allen, 330 ft. from NW, 2,310 ft. from SW, Sec. 90, Blk. 1, W.&N.W. Sur. ..... Material on ground.
Goldman et al's No. 1 Reagan-McElvain, 330 ft. from NE, 2,310 ft. from NW, Sec. 84, Blk. 1, W.&N.W. Sur. . Cellar.
Lewis & Siegel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur... S.D. 2,280 ft.
Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... Rig.
Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 ..... Spudded and S.D.
Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... Plugged back to 3,200 ft. to straighten hole; T.D. 3,660 ft.
Trinity Drlg. Co.'s No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 3, Blk. 2, W.&N.W. Sur. ..... S.D. 1,300 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... S.D. 2,960 ft.

PECOS COUNTY

Adams et al's No. 1 Shearer, 1,650 ft. from SE and 330 ft. from NE Sec. 101, Blk. 10 H.&G.N. Sur. .....
Aero Gas & Royalty Co.'s No. 2 Byrne, 1,470 ft. from NW and 1,500 ft. from SW, Sec. 54, Blk. 10, H.&G.W. Sur. ..... Drlg. 805 ft.
Cardinal Oil Co.'s No. 1-K Tippett, 1,650 ft. from S and 330 ft. from E, Sec. 61, Blk. 194, G.C.&S.F. Sur. .. S.D. 1,265 ft.; pulling csg.
Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Location.
Davis et al's No. 1 University, 1,650 ft. from S and 330 ft. from E, Sec. 31, Blk. 16 ..... Location.
Hampton et al's No. 1 Byrne, 1,980 ft. from NW and 1,500 ft. from NE, Sec. 54, Blk. 10, H.&G.N. Sur. ... S.D. 1,395 ft.; T.P. 1,356 ft.
Messinger et al's No. 1 Jones, 1,200 ft. from NW, 1,290 ft. from SW, Sec. 5, Blk. 9, H.&G.N. Sur. ..... Rigging up.
New State Oil Co.'s No. 1 Tippett, 1,349 ft. from S and 330 ft. from E, Sec. 40, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 1,425 ft.; 800 ft. oil in hole at 1,360-70 ft.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... S.D. 328 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 7-C University, 1,670 ft. from W and 725 ft. from S, Sec. 25, Blk. 9 ..... Drlg. 7,900 ft.
Big Lake Oil Co.'s No. 8-C University, 710 ft. from S and 2,410 ft. from E, Sec. 13, Blk. 2 ..... Material.
Big Lake Oil Co.'s No. 9-C University, 2,410 ft. from N and 765 ft. from E, Sec. 12, Blk. 2 ..... Moving in material.
Continental Oil Co.'s No. 6-B University, 765 ft. from N and 1,980 ft. from W, Sec. 36, Blk. 9 ..... Material.
Group Oil Corp.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 5,675 ft.

REEVES COUNTY

F. McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur. ... S.D. 1,903 ft.
Southern Star Oil Co.'s No. 1 Wright, 1,320 ft. from S and W, Sec. 58, Cassel's Sur. ..... S.D. 250 ft.

RUNNELS COUNTY

Blue Bonnett Oil Co.'s No. 1 McMillan, 1,368 ft. from N and 660 ft. from W, Sec. 22, N. Travis Sur. ..... T.D. 2,522 ft.; T.P. 2,520 ft.; flowing 80 bbls. daily.
Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... S.O. 3,417-20 ft.; S.D. 3,600 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... T.D. 5,410 ft.; fishing.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... S.D. 5,580 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,320 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft.

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, E.&T.C. Sub. ..... S.D. 5,100 ft.
W. S. Guthrie's No. 1 Snyder National Bank, 330 ft. from N and 2,310 ft. from E of Sec. 115, Blk. 97, H.&T.C. Sur. ..... Fishing 2,484 ft.; 7 bailers oil in 12 hrs. at 1,770-90 ft. and 2,340 ft.
Heinzleman et al's No. 1 Hood, 436 ft. from N and 489 ft. from E, Sec. 87, Blk. 3, H.&T.C. Sur. ..... Location.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 63, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D.
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... S.D. 4,992 ft.

TAYLOR COUNTY

Dunigan et al's No. 2 Hunter, 2,387 ft. from N and 2,567 ft. from E of Sec. 27, W. B. Wills Sur. No. 132 T.D. 1,850 ft.; set 8-in. csg.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk D, M.-K.-T. Sur. ..... S.D. 2,269 ft.

Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6. Georgetown Ry. Sur. ..... S.D. 3,150 ft.; moved off tools
McPhee-Briggs' No. 1 Kerr ..... Derrick.
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 130 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,153 ft. from E and 330 ft. from S. Sec. 36, Blk. 161, G.C.&S.F. Sur. S.D. 6,120 ft.
Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.
Sides et al's No. 1 Phelps, 2,167 ft. from N and 2,482 ft. from W. Sec. 5, G. W. Hurley Sur. ..... Fsg. 2,440 ft.

TOM GREEN COUNTY

Balding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... S.D. 760 ft.; S.O. and gas 725 ft
Minter Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur... S.D. 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft.

UPTON COUNTY

Clark-Cooper's No. 1 Lane, 2,310 ft. from N and 990 ft. from E Sec. 36, Blk. 1, M.-K.-T. Sur. ..... S.D. 100 ft.
Hope Pet. Co.'s No. 2 Lane, 2,310 ft. from N, Sec. 36, Blk. 1, M.K.&T. Sur. ..... S.D. 600 ft.
White's No. 1 Lane, 2,310 ft. from S and 990 ft. from E Sec. 36, Blk. 1, M.-K.-T. Sur. ..... Spudding.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1 ,I.&G.N. Sur. ... S.D. 400 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev 2,130 ft. ..... S.D. 6,780 ft.

WARD COUNTY

Abell Bros. et al's No. 1 Smith, 330 ft. from NE and NW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... S.D. 2,265 ft.
Atlantic Oil Prod. Co.'s No. 2 Barrow, 1,650 ft. from NE and 330 ft. from NW Sec. 23, Blk. 5, H.&T.C. Sur... S.D. 100 ft.
Barnsdall Oil Co.'s No. 2 Henry, 990 ft. from SE and 330 ft. from NE, Sec. 28, Blk. B-29, P.S.L. Sur..... Drlg. 2,010 ft.
Caprito et al's No. 1 Beatty, 330 ft. from SW and 990 ft. from SE, Sec. 3, Blk. 34, H.&T.C. Sur. ..... Drlg. 1,770 ft.
Eastland Oil Co.'s No. 2 Weiss, 1,091 ft. from SW and 2,365 ft. from SE, Sec. 4, Blk. 34, H.&T.C. Sur. .... Location.
Eastland Oil Co.'s No. 1-A Weiss, 2,364 ft. from SE, 323 ft. from SW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... S.D. 1,900 ft.
Eastland Oil Co.'s No. 2 Green, 2,364 ft. from NW and 330 ft. from SW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Location.
Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.
H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,223 ft.
Gulf Production Co.'s No. 22 O'Brien, 1,100 ft. from N and 330 ft. from E, Sec. 16, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. 2,745 ft.; flowing 80 bbls. day.
Gulf Prod. Co.'s No. 12 Hutchings, 330 ft. from N, 990 ft. from W, Sec. 3, Blk. F ..... Drlg. 2,362 ft.
Kregle et al's No. 1 Heasler, 3,062 ft. from SE, 330 ft. from NE, Sec. 46, Blk. 34, H.&T.C. Sur. ..... S.D. 525 ft.
Landreth Prod. Co.'s No. 1 Barker, 330 ft. from NW, 437 ft. from NE, Sec. 27, Blk. B-29, P.S.L. Sur. .... Drlg. 1,380 ft.
Leidecker et al's No. 2 Bennett, 2,310 ft. from NW and 1,650 ft. from NE, Sec. 16, Blk. 34 ..... Location.
Maxwell's No. 1 Brillhart, 2,310 ft. from NE and SE Sec. 13, Blk. 34, H.&T.C. Sur. ..... Cellar.
R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,532 ft. from SW, Sec. 1, J. Howe Sur. ..... S.D. 1,950 ft.
Penn Oil Co.'s No. 1 York, 2,310 ft. from NW and SW Sec. 10, Blk. 34, H.&T.C. Sur. ..... S.D. 2,265 ft.; 4,000,000 ft.; dry gas 2,260 ft.; rig burned.
Penn Oil Co.'s No. 1 Hardage-Wilson, 330 ft. from NE and SE Sec. 11, Blk. 34, H.&T.C. Sur. ..... Material on ground.
Plains Prod. Co.' and Simms Oil Co.'s No. 1 Benton Land Co., 440 ft. from the SE and 440 ft. from SW lines of Sec. 26, W.&N.W.R.R. Sur., Blk. 1 ..... T.D. 4,825 ft.; to plug.
Rector Oil Co.'s No. 1 Monroe, 660 ft. from NE and SE. Sec. 62, Blk. 33, H.&T.C. Sur. ..... Drlg. 2,180 ft.
Renaud-Prettyman's No. 1 University, 330 ft. from N and E Sec. 4, Blk. 16 ..... Drlg. 2,730 ft.; flowing 108 bbls. day.
Richardson's No. 10 O'Brien, 1,897 .ft. from N and 990 ft. from W Sec. 5, Blk. F ..... Drlg. 720 ft.
Rixford-Fuglarr's No. 1 London, 660 ft. NW, 330 ft. NE E cor. Sec. 10, Blk. 32, H.&T.C. Sur., but in Sec. 8 ..... Drlg. 880 ft.
Stanolind Oil & Gas Co.'s No. 2 Weiss, 330 ft. from SW and 1,810 ft. from SE, Sec. 4, Blk. 34, H.&T.C. Sur... Location.
T. P. Coal & Oil Co.'s No. 4 James, 330 ft. from NE and 2,365 ft. from SE, Sec. 5, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,360 ft.
Thomas et al's No. 1 Bennett, 2,310 ft. from NE and SE. Sec. 16, Blk. 34, H.&T.C. Sur. ..... Cmtd. csg. 2,268 ft.
Weekly Oil Corp.'s No. 1 Burks, 330 ft. from SE and 1,320 ft. from SW Sec. 26, Blk. B-29, P.S.L. Sur. ..... Drlg. 605 ft.
White et al's No. 1 Burtner, 150 ft. from NE and 515 ft. from SE of Sec. 8, Blk. 32, H.&T.C. Sur. ..... S.D. 755 ft.

WINKLER COUNTY

Sid Richardson et al's No. 1 Scarborough, 1,650 ft. from N and W, Sec. 1, Blk. 77, P.S.L. Sur. ..... Drlg. 1,385 ft.
Sid Richardson et al's No. 2 Sealy estate, 1,650 ft. from S and 330 ft. from W. Sec. 94, Blk. A, G.M.M.B.&A. Sur. ..... Rigging up machine.

Wildcat Operations in Texas Panhandle

Week Ending August 29

CARSON COUNTY

Company, well, farm name, section and block—	Remarks:
H. A. M. Oil Co.'s No. 2 Cooper, 330 ft. from S and E. Sec. 5, Blk. 9, I.&G.N. Sur.	Drlg. 2,250 ft.
Osborne's No. 1 Byrum, 330 ft. from N and E, N½ NW, Sec. 188, Blk. 3, I.&G.N. Sur.	Drlg. 2,643 ft.
Skelly Oil Co.'s No. 13 East Schaffer, 1,210 ft. from S, 2,100 ft. from E, Sec. 189, Blk. 3, I.&G.N. Sur.	Drlg. 2,382 ft.
Stubblefield-Shell's No. 3 Cooper, 330 ft. from N and 330 ft. from E of SE, Sec. 5, Blk. 9, I.&G.N. Sur.	Cellar.
Texoma Nat. Gas Co.'s No. 2-G Burnett, 1,342 ft. from S, 2,670 ft. from W, Sec. 102, Blk. 5, I.&G.N. Sur.	Rigging up standard tools.
Texoma Nat. Gas Co.'s No. 1-T Burnett, 1,324 ft. from N and E of E half, Sec. 64, Blk. 5, I.&G.N. Sur.	Drlg. 1,500 ft.

CHILDRESS COUNTY

Robertson's No. 1 Biddy, center S 26½ acres of N, Laughlin Sur. Blk. T	Rig.

COLLINGSWORTH COUNTY

Cochran Bros.' No. 1 Atkinson, 660 ft. from N and E, Sec. 26, Blk. 21, H.&G.N. Sur.	Spudded.
Downey et al's No. 1 Beasley, SE cor. SW SE, Sec. 95, Blk. 15, H.&G.N. Sur.	Rigged up.
Kates et al's No. 1 Hickman, center NE, Sec. 43, Blk. 10, H.&G.N. Sur.	Drlg. 765 ft.
Kates et al's No. 1 Bell, 200 ft. from N, 2,310 ft. from W. Sec. 31, Blk. 102, H.&G.N. Sur.	Drlg. 460 ft.

COTTLE COUNTY

Darby Pet. Co. et al's No. 1 Puesell, 330 ft. from N, 1,320 ft. from E. Sec. 40, Blk. B, John H. Stevens Sur.	Drlg. 2,672 ft.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 18-3n-2e	S.D. 1,240 ft.

GRAY COUNTY

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W. Sec. 140, Blk. 25, H.&G.N. Sur.	S.D. 2,428 ft.
Bell O. & G. Co.'s No. 1 Tedesco-Webb, 330 ft. from S and E, Sec. 61, Blk. 25, H.&G.N. Sur.	T.D. 2,603 ft.; T.P. 2,584 ft.; swabbed 165 bbls. in 10 hrs.
Boyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur.	Drlg. 2,350 ft.; gas 2,140-80 ft.
Dixon Creek Oil Co.'s No. 1 Chapman, 330 ft. from S and W, Sec. 69, Blk. 25, H.&G.N. Sur.	Rigged up.
Graham-Crue Hoover's No. 1 Barrett, 330 ft. from S and W, Sec. 130, Blk. 3, I.&G.N. Sur.	Rig.
Gulf Prod. Co.'s No. 7 Saunders, 330 ft. from N and W, SW, Sec. 40, Blk. 3, I.&G.N. Sur.	Drlg. 3,085 ft.; T.P. 2,960 ft.; 1,200 feet oil in hole.
Jewel Oil Co.'s No. 1 Meers, 330 ft. from S and W, NW SW, Sec. 106, Blk. 3, I.&G.N. Sur.	S.D. 3,483 ft.
Kewanee O. & G. Co.'s No. 1-C Adams, 330 ft. from S and E, Sec. 3, Blk. 26, H.&G.N. Sur.	Drlg. 2,415 ft.; increase gas 2,320-25 ft.
Kewanee O. & G. Co.'s No. 1-F Morse, 330 ft. from S and W, Sec. 3, Blk. 26	Rig.
Magnolia Pet. Co.'s No. 6 fee, 660 ft. from S and W, Sec. 14, Blk. 3, I.&G.N. Sur.	Drlg. 978 ft.
Nipper et al's No. 1 Morse, 330 ft. from N and E, Sec. 1, Blk. 26, I.&G.N. Sur.	Fishing 2,635 ft.
Nabob Oil Co.'s No. 1-E Morse, 330 ft. from S and W, W½ SE, Sec. 67, Blk. 25, H.&G.N. Sur.	Fishing 3,000 ft.
Parton & Holt's No. 2 Morse, 330 ft. from W, 350 ft. from N, W½ SW, Sec. 6, Blk. 26, H.&G.N. Sur.	T.P. 2,435 ft.; drlg. 2,605 ft.
Parton Holt's No. 3 Morse, 660 ft. from N and E of E half SW, Sec. 5, Blk. 26, H.&G.N. Sur.	Fishing 1,300 ft.
Plains Drlg. Co.'s No. 1 Thut, 960 ft. from N, 330 ft. from W, Thut Sur.	Drlg. 620 ft.
Pulse-Shell Pet. Corp.'s No. 1 Culler, 330 ft. from S and E, Sec. 173, Blk. 3, I.&G.N. Sur.	T.D. 3,264 ft.; T.P. 3,134 ft.; no test yet.
Pulse-Shell's No. 1 Brown, 290 ft. from N, 350 ft. from E of NW, Sec. 128, Blk. 3, I.&G.N. Sur.	Drlg. 590 ft.
Richardson's No. 1 Wright, 330 ft. from S and W, Sec. 12, Blk. 3, I.&G.N. Sur.	Rigging up rotary.
Saunders et al's No. 3 Sullivan, 822 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur.	Will plug back to 3,375 ft. and shoot.
Skelly Oil Co.'s No. 3 Vicars, 330 ft. from S and E, Sec. 127, Blk. 3, I.&G.N. Sur.	T.D. 2,552 ft.; standardizing.
Skelly Oil Co.'s No. 5 Saunders, 330 ft. from S, 928 ft. from E, Sec. 4, Blk. 1, A.C.H.&B. Sur.	Drlg. 2,462 ft.
Sun Oil Co.'s No. 3 Combs-Worley, 450 ft. from N and 660 ft. from E of SE, Sec. 35, Blk. 3, I.&G.N. Sur.	Drlg. 2,310 ft.
Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.B.&S.F. Sur.	Location.
The Texas Co.'s No. 4 Bull, 1,65 ft. from S, 330 ft. from W, Sec. 2, Blk. B-2, H.&G.N. Sur.	T.D. 3,048 ft.; crooked hole.
The Texas Co.'s No. 10 Cook-Faulkner, 330 ft. from S, 1,605 ft. from W, Sec. 28, Blk. B-2, H.&G.N. Sur.	Plugged back to 2,036 ft.
The Texas Co.'s No. 11 Williams, 330 ft. from N, 990 ft. from E NW, Sec. 7, Blk. 1, A.C.H.&B. Sur.	Drlg. 1,925 ft.
Thorp et al's No. 1 Short, 330 ft. from N and E, Sec. 2, Blk. 1, H.&G.N. Sur.	Drlg. 2,965 ft.
Tripplehorn Bros' No. 1 Lovett, 330 ft. from N and W, Sec. 57, Blk. B-2, H.&G.N. Sur.	T.D. 900 ft.; pipe stuck.
Travis et al's No. 2-B Webb, 990 ft. from S, 330 ft. from E of NW, Sec. 61, Blk. 25, H.&G.N. Sur.	Spudded.
Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 47, Blk. 26, A.&G.N. Sur.	S.D. 1,000 ft.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,200 ft. from E, G. S. Hood Sur.	To deepen old well; T.D. 5,055 ft.

HUTCHINSON COUNTY

Baso's No. 1 Moore, 330 ft. from S, 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur.	T.D. 3,080 ft.; estm. 5 or 10 bbls.; may plug.
Canadian River Gas Co.'s No. 2-A Dunaway, 330 ft. from N and W, SE, Sec. 5, Blk. Y-2, T.T.R.R. Sur.	Moving in rig.
Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur.	Spudded and S.D.
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 51, Blk. 46, H.&T.C. Sur.	S.D. 450 ft.
Holmes & Newblock's No. 2 Moore-Langdon, 330 ft. from N and W, Sec. 125, Blk. 4, I.&G.N. Sur.	S.D. for repairs 2,947 ft.
Huber Pet. Co.'s No. 2 Christian, 330 ft. from S and E, SW, Sec. 33, Blk. Y, A.&B. Sur.	Rigging up cable tools.
Huber Pet. Co.'s No. 1 Moyer-Johnson, 990 ft. from N, 330 ft. from E half SW, Sec. 34, Blk. Y, A.&B. Sur.	Drlg. 280 ft.
Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur.	Plugged back to 3,146 ft.; S.D.
Oates & Morrow's No. 2 Starnes, 1,400 ft. from S, 650 ft. from E, Sec. 24, Blk. M-23, T.C.R.R. Sur.	Drlg. 1,145 ft.
Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur.	Shut down.
Stansylvania Oil Co.'s No. 3 Stansbury, 236 ft. from S, 1,264 ft. from W, Sec. 129, Blk. Z, E.L.&R.R. Sur.	Rig.
Steckol Prod. Co.'s No. 3-D Whittenburg, 330 ft. from S and 990 ft. from W, Sec. 38, Blk. M-23, T.C.R.R.	Drlg. 2,980 ft.; T.P. 2,940 ft.
Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur.	Drlg. 350 ft.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur.	T.D. 5,003 ft.

MOORE COUNTY

Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur.	Drlg. 1,022 ft.
Interstate's No. 1 Nield, C NE, Sec. 18, Blk. 44, H.&T. C. Sur.	Rig up.
Polk et al's No. 1 Hall, 330 ft. S and E, NE, Sec. 131, Blk. 3-T, T.&N.O. Sur.	Rig on ground.
Shamrock Oil & Gas Co.'s No. 2 Brumley, 330 ft. from N and W, Sec. 360, Blk. 44, H.&T.C. Sur.	T.D. 3,163 ft.; skidding rig.
Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur.	Drlg. 1,210 ft.
Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur.	Rig.

MOTLEY COUNTY

Matador Oil Corp.'s No 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur.	S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur.	S.D. 400 ft.
Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. 8, G.C.&S.F. Sur.	T.D. 4,000 ft.; fishing pipe.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur.	Drlg. 4,285 ft.
Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur.	S.D. 2,690 ft.

WHEELER COUNTY

Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24 H.&G.N. Sur.	T.D. 2,760 ft.; S.D. for pipe line connection.
Elbar Corp.'s No. 1 Huselby, 1,656 ft. from N, 350 ft. from W, Sec. 70, Blk. 24, H.&G.N. Sur.	Moving in rig.
Piney Oil & Gas Co.'s No. 4 Thompson, 330 ft. from S and E of E half SW, Sec. 42, Blk. 24, H.&G.N. Sur.	T.D. 300 ft.; pipe trouble.

Complete Second Good Well in Gueydan Field; New Sand Opened Northeast of Sour Lake

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Aug. 29.—Completion of the second good well at Gueydan, Vermillion Parish, Louisiana, opening of new flank sand production on the northeast side of Sour Lake, Hardin County, together with further proving up and increase in activity at Conroe were among the chief developments on the Gulf Coast the past week. New work generally over the coast showed further pick up with the result that there is more drilling going on now than at any time within the past two years.

At Gueydan, one of this year's new fields, Pure Oil Co. has completed its second producer, No. 1 Mulvey Irrigation Co., which came in Friday night flowing initially 19 bbls. hourly with a pressure of 1,500 pounds. Productioin, however, has shown a steady increase to better than 27 bbls. hourly, flowing through a three-eighths inch choke with pressure of 1,180 pounds. It is in sand at a total depth of 4,004 feet, where one joint of 7-inch screen was set.

Location of this well is 439 feet southeast of the discovery well, Pure Oil Co.'s No. 2 Alliance, which is producing from the sand at a total depth of 4,029 feet. The latter originally was completed last April in sand at 3,532-52 feet but produced only a couple of weeks and then was deepened to the present sand. Gravity of the oil in both wells is between 27 and 28 degrees (A.P.I.) and the crude has proved unusually desirable and is being moved by tank car to the company's refinery at Smith's Bluff.

Gueydan is a geophysical field, discovered by Pure Oil Co., which company controls a large block. Additional acreage, however, is held by Humble Oil & Refining Co., Magnolia Petroleum Co. and Gulf Refining Co. The field already has been definitely proved as a dome by one well, No. 1 Alliance Trust Co., drilling into salt, topped at 6,404 feet. The latter is located nearly a half mile to the southwest of the two producing wells.

At Sour Lake

At Sour Lake, Prudential Oil Co. (Earl Hankamer and associates) have brought in No. 1 Maco Stewart, on the extreme northeast side of the Sour Lake Dome. With two joints of 4½-inch screen set in sand at 3,955-97 feet, the well came in flowing 800 bbls. daily through a one-half inch choke with pressure of 300 pounds. The oil is 35.2 gravity (corrected).

This is the first production so far on the northeast, as well as anywhere on the east side of the dome. A number of years ago some drilling was done in that area but that did not result in the finding of any commercial production. The only flank sand production at present is on the south side, where several wells were drilled years ago, although that production has not proved particularly consistent.

Drilling of this well marks the first activity at Sour Lake in many months but the fact that a subdivision, cut into many small tracts, is located a short distance away, may result in a drilling play in that area. Sour Lake, itself, is one of the older domes and fields but the bulk of production has been confined to shallow sands overlying the dome.

Conroe Development

Completion of Moore and Bruton's No. 1 Hooper in the north end of the L&G.N. Survey 650, Conroe, Montgomery County, the middle of the week, has resulted in a new spurt in drilling activity in that field. The well, estimated good for between 3,000 and 3,500 bbls. daily, is rated as the best so far brought in at Conroe. The well flowed 176 bbls. of pipe line oil in the first hour through a three-quarters inch choke, and cut to a five-sixteenths inch choke, flowed 1,216 bbls. in the first 24 hours. It has one of the best sand sections so far encountered, which at a total depth of only 5,050 feet is relatively high.

Offsetting the well to the north Humble Oil & Refining Co. has rigged up for No. 2 Cartwright in the John Davis Survey, the check location being 454 feet north of the south line and 928 feet west of the east line of the Cartwright lease. Offsetting to the east Hooper Oil Co. is rigging up for No. 1 W. M. Hooper, 466 feet from the north line of the L&G.N. Survey 649, and in the center east and west. Houston Oil Co. and Heep Oil Co. have derrick up for No. 1 Hooper, offsetting the Moore and Bruton 46-acre lease to the south and in the same survey, it being 450 feet south of the north line of the lease in the center east and west.

Other new operations started at Conroe include Humble Oil & Refining Co.'s No. 3 Cartwright, west offset to Heep Oil Co.'s No. 1 Freeman; No. 4 Cartwright, north offset to Hooper Oil Co.'s No. 1 Hooper; the same company's No. 1 Plaefflin, 626 feet east and 343 feet north of southwest corner of the lease in the W. N. Real Survey, recently acquired from the Eagle Oil Co.; the same company's No. 10 South Texas Development Co., west offset to Alpha Oil Co.'s No. 1 South Texas Development Co., completed several weeks ago, and Houston Oil Co. and Heep Oil Co.'s No. 1 Dobbins, 466 feet east of the west line in center north and south of the Heep 100-acre lease, Ransom House Survey. The latter is a north offset to Humble Oil & Refining Co.'s No. 1 Dobbins, which now is being watched as an important key test. The latter, located nearly 2 miles to the southeast of productioin, found the Hockley marker at minus 3,732 feet, which is approximately 100 feet higher than any other test yet drilled in the area and indicates the apex of the structure in that direction. This well late in the week was in sand and shale showing oil at 5,113 feet.

Now 23 Operations

Late in the week, Rowe & Flower's No. 1 Alexander, upper Alex McCown Survey, a key test a mile northwest of production, was expected to make some kind of a well in sand and shale at approximately 5,100 feet. Drill stem tests of the horizon at 5,063-5,119 feet last month did not show so favorably, but since, after drilling to a total depth of 5,254 feet, the test has been plugged back to 5,096 feet, where a small well may be made. It is indicated that this is an edge test.

There now are 23 active operations in the Conroe district, including tests which are rigging up. The chief interest in the field now is centered in the possible outcome of the proration hearing to be held at Austin August 30. The field at present has no production restrictions, excepting those imposed by pipe line limits and efforts of the State Railroad Commission to place in effect a drastic cut in production may result in a battle by certain operators. The commission recently set a maximum allowable having a base of 40 bbls. per well with additional per acre allowances, but this restriction was suspended pending the hearing coincident to the action taken by Alpha Oil Co. for an injunction.

Barbers Hill

At Barbers Hill, Mills Bennett Production Co.'s No. 4-A E. W. Barber, north flank of the dome, has been completed flowing 384 bbls. of pipe line oil daily with a pressure of 165 pounds through a three-eighths-inch choke. Production is from a sand and shale at 5,142 feet reached after drilling through sale at 1,427-3,318 feet. This is the third producer to be completed in this area, one of which (No. 1-B Barber) now is creating considerable interest in that field as a result of having been deepened to find a new deep sand at 5,924-47 feet on which casing will be set to test. This sand is in the top of the Jackson, and, while a few wells on other parts of the dome have gone to the Jackson, the bulk of the production has been from the Miocene and Oligocene.

Rabbs Ridge and Manvel

The latest addition at Rabbs Ridge, Fort Bend County, is Humble Oil & Refining Co. and Gulf Production Co.'s No. 3-B Lockwood & Sharp, which came in early in the week flowing 52 bbls. hourly through a three-eighths-inch choke from sand at 5,344 feet. There were no other completions on the coast of importance, although at the close of the week several interesting tests were due in, including The Texas Company's No. 3 Belcher, Manvel, Brazoria County, which was testing a Miocene sand at 3,992-4,009 feet. Two other wells, one of which has been abandoned, have found production at Manvel but both were in a lower Oligocene sand.

Leesville Prospect

Another geophysical prospect and field has been added to the list of proven domes by the finding of salt at Leesville, LaFourche Parish, Louisiana, by The Texas Company's No. 5 L.L.&E. The salt was topped at 4,107 feet. This is the sixth test drilled on the dome, three of which have made commercial producers. The present test flowed for a short time on completion in a sand at 3,653-68 feet. Leesville was discovered by seismograph in 1928 by the Louisiana Land & Exploration Co., which turned the dome over to The Texas Company for development.

Gulf Coast Fields and Wildcats

Week Ending August 27

RACCOON BEND—AUSTIN COUNTY

Company, farm and location—	Remarks:
Grant & Baker's No. 1 Chesley, W. C. White Sur., 150 ft. from NW line and 150 ft. from SW line of 26-acre tract	Sandy shale 3,043 ft.; S.D.

WEST COLUMBIA—BRAZORIA COUNTY

The Texas Company's No. 7 Abrams (W.O.), George Tennille Sur.	T.D. 3,131 ft; standing.

BARBERS HILL—CHAMBERS COUNTY

R. E. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	T.D. 3,000 ft. in shale; fishing.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 520 ft. N along E line from SE cor. of tract, thence 75 ft. W at right angles, thence 75 ft. N at right angles	Location.
Mills Bennett Prod. Co.'s No. 1-B Barber (W.O.), Henry Griffith League	Sand showing oil 5,924-47 ft; setting csg.
Mills Bennett Prod. Co.'s No. 4-A E. W. Barber, Henry Griffith League, 300 ft. W of No. 3-A, 50 ft. N of S line	Drlg. sand and shale 5,143 ft.
Mills Bennett Prod. Co.'s No. 2 Gulf-Fisher (W.O.), Wm. Bloodgood Sur.	Rig up to W.O. 5,242 ft.
Mills Bennett Prod. Co.'s No. 4 Kirby, Henry Griffith League, 200 ft. W of No. 3	Anhydrite 1,357 ft; cmtd. to 1,045 ft.
Rio Bravo Oil Co.'s No. 3 Fisher, Wm. Bloodgood Sur., 300 ft. E and 33 ft. S of NW cor. of tract	Drlg. anhydrite 6,043 ft.
Sun Oil Co.'s No. 3 Higgins, Wm. Hodges Sur., 50 ft. from E line of tr. and direct offset McAlbert Oil Co.'s No. 2-B Higgins	Sand showing oil 2,529-33 ft.; cmtd. 8⅝-in. csg.
Texas Gulf Prod. Co.'s No. 2-C Kirby, 562 ft. from W line, 50 ft. from S line of "C" lease	Drlg. rock 1,258 ft.
Texas Gulf Prod. Co.'s No. 4-C Kirby, Henry Griffith League, 388 ft. from W line and 50 ft. from S line of "C" lease	Drlg. rock 987 ft.
Texas Gulf Prod. Co.'s No. 11-A Kirby, Henry Griffith League, 1,090 ft. from W line and 225 ft. from S line of "A" lease	Cmtd. 13⅜-in. csg. on bottom 2,534 ft.
Texas Gulf Prod. Co.'s No. 10-H Kirby, Henry Griffith League, 30 ft. W of No. 3 Iltrey	Sand showing oil 5,085-5,101 ft.; set screen; swbng.
Texas Gulf Prod. Co.'s No. 11-H Kirby, Henry Griffith League, 150 ft. W of No. 10-H	Drlg. shale 3,141 ft.
Texas Gulf Prod. Co.'s No. 2 T. H. McLean, Henry Griffith League, 711 ft. from E line midway between C. Barber and McLean tracts on separating line	Rigging up.
Texas Gulf Prod. Co.'s No. 2 O. K. Winfrey, W. D. Smith Sur., 295 ft. N of SW cor. of A. E. Barber lease and 100 ft. W of E line of Winfrey lease	Derrick.
Yount Lee Oil Co.'s No. 4-A Zadie Fisher, Wm. Bloodgood Sur., 301 ft. from W line and 94 ft. from S line of tract	Drlg. hard sand and lime 3,535 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 16 Mayes, E. H. R. Wallis Sur., 1,825 ft. N and 1,439 ft. E of No. 1 Lost River	Building derrick.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 34 Moore, Mark Smith Sur.	Drlg. shale 1,851 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 1 Gubbels, 300 ft. E and 300 ft. N of SW cor., Blk. 4, Samuel Kennedy Sur.	Drlg. gravel 262 ft.

(Continued on Page 61)

Eternal Vigilance Required to Maintain Equitable Proration Rule in Oklahoma City Field

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

During the week several important events developed dealing with the proration situation in the Oklahoma City Field. The Union Crude Oil Transportation Corp. was ordered to cease transporting crude oil from the field until it has complied with military rules and regulations.

The company has pipe line connections to two refineries, two producing companies and to a loading rack. It is alleged that the company has failed to file daily reports on the amount of oil shipments and has failed to meter its pipe line runs.

Lieut. Col. Cicero I. Murray said that the company had connections to the Champlin Refining Co. pipe lines, the White Oak Refining Co. and Capitol Refining Co., and the gathering lines of the H. F. Wilcox Oil & Gas Co. It is alleged the Union Transport Corp. has refused to file maps of its lines with the military, and also refused to install meters in accordance with the governor's military order.

The Union Crude Oil Transportation Co. petitioned the district court for a restraining order and was granted such an order, but Governor Murray instructed Col. Cicero Murray to disregard the decision of the court because it had no jurisdiction. Subsequently the district court threw a case against the Russell Petroleum Co. out of court because it had no jurisdiction, which decision was taken to automatically apply also to the Union case. An appeal was taken to the State Supreme Court by the Russell Petroleum Co.

The Russell Petroleum Co.'s suit attacked military control of two of its wells, which were shut in about two weeks under the direction of Lieut. Col. Cicero I. Murray, in charge of military enforcement of proration in the Oklahoma City Field.

The decision announced by Judge Hooker of the three-judge district court, after a conference following conclusion of the arguments, follows in part: "We have reached the conclusion that evidence is unnecessary and immaterial and the objection will be sustained for the reason that in our judgment this court has not the jurisdiction to enjoin or prohibit the Corporation Commission from proceeding to try the plaintiff here upon any charge whatsoever. If they attempt to try the plaintiff upon a charge over which they have no jurisdiction, the plaintiff has a remedy in the Supreme Court, but we do not think we could enjoin the Oklahoma Corporation Commission, and evidence along that line is unnecessary.

"Upon the other proposition, we have reached the conclusion that it does not lie within the power of our district court to supervise the conduct of the governor and his National Guard, and the orders having been issued by the Corporation Commission, and the proclamation of the governor having been issued ordering enforcement of those orders, this court cannot interfere, and for that reason the evidence is incompetent and immaterial."

The decision leaves the control of the proration in the hands of the militia, under Governor Murray's executive order, issued when other methods of enforcing proration were meeting with objections.

Production Situation

Crude oil production in Oklahoma has been steady during the last few weeks and with the exception of a few in the Oklahoma City Field all operators in the State are co-operating with the curtailment program by keeping production in line with the requirements.

It appears that the trouble to make all operators comply with curtailment orders will continue as long as proration is in force.

The end of the large consuming season is near at hand and many express the opinion that the production from the flush fields in the State will be further cut back during the winter months, this being the only method of stabilizing the situation.

The major purchasers have been reluctant to accumulate stocks during the past year and in all probability will not during the winter season.

The flush pools in the State that are believed to be capable of producing considerable more oil than their allowable include Oklahoma City, East Earlsboro, Fish Pool, West Seminole, South St. Louis, West Chandler in Lincoln, Tatums Pool in Carter County, and the County Line Pool in Lincoln-Creek Counties.

Drilling operations in the State did not show much of a change during the first part of the summer season, but the August report shows a decline in all operations of over 50.

Evary field in the State with the exception of those mentioned above has shown a steady decline during the last several months. Some new work may result from lease requirements, but the drilling is expected to be of routine nature.

Due to the enormous potential production built up in the Oklahoma City Field, it is expected the operators have reduced the development work to a minimum in that field.

Good Well in Tatums Field

Crude oil production in southern Oklahoma was increased by the completion of a new well, estimated at 400 bbls. daily in the Tatums Pool, in Carter County. It is located on the northeast edge of the producing area and will force three offsets. The well is Ratliff & Colvin's No. 1 Ratliff, NW cor. NE NW SW, Section 19-1s-2w. The sand series was found from 1,659-1,826 feet. The three offsets are all owned by the Carter Oil Co.

Other tests nearing the producing horizon include, Noble and others' No. 1 Trahern, NE cor. SE NW, Section 31-1s-2w, which was expected to reach the pay sand in a few days. It offsets P. Robb and others' No. 1 Burton, which is shut in after swabbing 435 bbls. of oil in 24 hours.

P. Turner and others' No. 1 Sparks-Carter, SW cor., Section 13-1s-3w, is a new rig, three locations north of production in the area.

Athey and others' No. 1 Pierce, NE cor. SE, Section 18-2s-2w, an old gas well, is rigging up to drill deeper from an old total depth of 2,021 feet, where it made 7,000,000 feet of gas when completed.

In Stephens County

In the Stephens County areas, the development is in the older producing areas, where 11 operations were listed at the close of the week.

Chambers and others' No. 1 Dolan, SW cor. NW NW, Section 15-1s-8w, Stephens County, near old production was waiting for cement to test a sand found at 2,111 feet.

Two miles south of old Palacine Field, in Stephens County, Dunmar Oil Co.'s No. 1 Lang, NE cor. SE NE, Section 16-2s-6w, was drilling at 2,790 feet with the Palacine pay depth only about 100 feet deeper. If this test makes a commercial well it will force several other tests in the vicinity.

A wildcat test near the Comanche Field was expected to reach the pay depth in a few days. G. L. Pace's No. 1 McDonald, NW cor. NE NW, Section 28-2s-7w, was drilling at 1,550 feet. The test is located southwest from the same operator's wells on the Watkins farm.

Holdenville Activity

The Holdenville area of Hughes County is one of the active areas in the State. Several wells are nearing the pay horizon and others are preparing to spud. Several new operations are preparing to drill to the shallow formation in the area.

The Limestone Oil & Gas Co.'s No. 1 Walker, NW cor. NE NW Section 22-7-8, is a rig south of the discovery shallow well in the field. Same company is drilling at its No. 1 Holmes, SW cor. Section 11-7-8, at 500 feet. It is located north of the discovery well. The same company's No. 1 Chupco, in Section 15-7-8, has completed the rebuilding of the rig after it was pulled in when the crew started to underream at a total depth of 1,050 feet, where they found a hole full of water.

Other tests preparing to drill to the shallow formations include Bay Oil Co.'s No. 1 Narcomey, in Section 14-7-8. Milan & Capshaw's No. 1 Holmes, SE cor. SW SW Section 12-7-8.

Mid-Continent Petroleum Corp.'s No. 1 Jacobs, NE cor. SE Section 9-7-8, was drilling at 700 feet on last reports. The test is located in the area where three other producers have been completed. Same company's No. 1 Tiger, SE cor. Section 9-7-8, was ready to spud.

Burke-Greis Oil Co.'s No. 1 Chapman, SW cor. NW Section 10-7-8, was spudding. It offsets the recent completion of G. Manahan's Narcomey, which was a good well.

Rapid progress is being made at the Producers & Refiner Corp.'s No. 1 Edwards, SE cor. NE NE Section 8-7-8. If this test make a commercial producer, it will extend the production of the Holdenville Pool to the west, as this is the first test to be drilled in the section.

Reviving Old Pool

An attempt is being made to revive the shallow oil production in the old Hanbury Pool, 11 miles northeast of Lawton, in Comanche County. A. E. Trowbridge and others' No. 1 Price, CNL SW NE NE Section 30-2-9w, was coring a sand at 1,313-26 feet. The core showed oil and gas, and the owners believe that the showing is sufficient to make a commercial well.

The Hanbury Field was discovered in 1925, and flush production from wells in this field was around 400 bbls. daily from the shallow producing horizon. Some of the wells are still on the pump, a few having been abandoned. Trowbridge and others have leased about 400 acres in the old field and are attempting to revive the area. It is believed by some that the first wells were drilled too deep into the Granite wash.

Near the new test and on the same farm a well was drilled about seven years ago which is still pumping. The new test is checking with the first well on all formations.

Petroleum Producers, Inc.'s No. 1 Allen, NE cor. SW SW Section 24-2-10w, has spudded. It is a twin well to a hole that is standing with 2,000 feet of oil in the hole, which was drilled to a total depth of 2,035 feet.

Several other tests are expected to start in the vicinity of the drilling wells if they make commercial producers. The No. 1 Price is being drilled with rotary tools and the No. 1 Allen is using a spudder for the first 500 feet and then a Star machine will be moved onto the location.

Atoka County

Barton and others' No. 1 Miller, NE cor. SW SW, Section 26-1-14, is a machine. Croxton's No. 3 Moore, CWL NW NW, Section 2-1s-14, is a location. Same operator's No. 2 Southern Trust, C SW SW, Section 3-1s-14, is a location. Same operator's No. 2 Moore, NW cor., Section 2-1s-14, was abandoned at 265 feet. McClure's No. 1 Little John, NE cor. NW NE SW, Section 9-1s-14, is a machine. S. Miller's No. 1 Miller, NW cor. NE SW NE, Section 9-1s-14, was spudding.

Coal County

Dodd & Burton's No. 1 Grigsby, NW cor. SE NE, Section 35-1-8, is a location.

Carter County

P. Turner's No. 1 Carter, SW cor. NW, Section 13-1s-3w, is a rig. Russell's No. 1 Ratcliff, NW cor. NE NW SW, Section 19-1s-2w, made 496 bbls. from 1,777-1,856 feet. Robb and others' No. 1 Burton, NE cor. SW NE, Section 31-1s-2w, made 47 bbls. from 1,811-20 feet; total depth 2,250 feet. Same operators' No. 2 Burton, SW cor. NE, Section 31-1s-2w, made 435 bbls. from 2,290-2,330 feet.

Cotton County

Shasta Oil Co.'s No. 1 Cary, NE cor. SW SW, Section 18-1s-2w, was abandoned at 2,619 feet.

Hughes County

Milam & Capshaw's No. 1 Holmes, SW cor. SE SW SW, Section 11-7-8, is a machine. Oliphant's No. 2 Narcome, SW cor. NW NW, Section 14-7-8, is a machine. Peters and others' No. 1 Walker, NW cor. NE SW, Section 22-7-8, is a machine.

Jefferson County

Shasta Oil Co.'s No. 1 Bollinger, SW cor. NE SW, Section 26-4s-6w, was spudding.

Kiowa County

McWhirten Brothers' No. 1 Kline, SE cor. NW, Section 5-6-16w, was drilling at 800 feet.

Lincoln County

Pure Oil Co.'s No. 1 Chapman, SW cor. NW, Section 6-15-7, is a rig on the ground. Same company's No. 3 Steele, NW cor. SW, Section 6-15-7, is a rig on the ground. S. Hall and others' No. 1 Fish, SW cor. SE SW, Section 10-15-7, is a rig on the ground.

Marshall County

Weaver & Porter's No. 1 Dobyns, NE cor. SE SE NE, Section 4-7s-6, is a rig. Thomas and others' No. 1 Setiff, SW cor. SE SW, Section 36-5s-6, was spudding. Southward and others' No. 1 Howard, NE cor. SE NE NE, Section 10-7s-6, was spudding. Shepard and others' No. 1 Howard, C NW NW, Section 11-7s-6, was spudding. Mitchell & Kilborne's No. 1 McDuffee, SW cor. NE, Section

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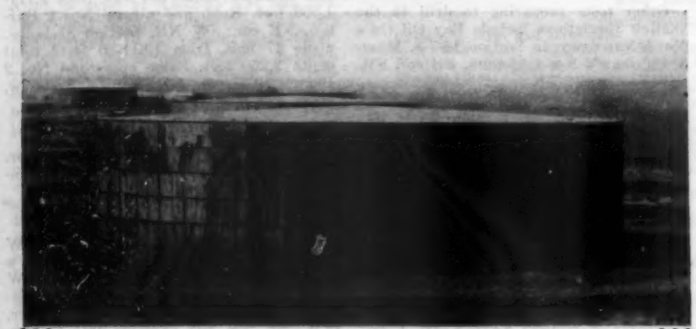

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3-7s-6, was abandoned at 817 feet. Weaver and others' No. 1 Colby, SW cor. NW, Section 32-7s-6, was abandoned at 461 feet.

McCurtain County

Prassell and others' No. 1 Wagoner, SE cor. NE, Section 5-8s-27, was abandoned at 1,040 feet.

Oklahoma County

Phillips Petroleum Co.'s No. 1 Devore, CNL SE SE, Section 22-11-3w, is a location. Phillips Petroleum Co.'s No. 2 Drew, NW cor. SE NW SE, Section 22-11-3w, is a location. Same company's No. 1 Wallace, NW cor. SE SE, Section 22-11-3w, is a location. Same company's No. 1 Brim, CEL NW NE, Section 3-11-3w, made 13,833 bbls. in eight hours from 6,305-6,477 feet.

Pontotoc County

Superior Oil Co.'s No. 1 Mauldin, SE cor. SW NW, Section 32-5-5, made 120 bbls. from 2,413-67 feet.

Pottawatomie County

Taylor and others' No. 1 Green, SE cor. NE, Section 36-7-4, was digging cellar.

Pittsburg County

Tate Oil Co.'s No. 1 Fulton, SE cor., Section 34-7-14, was abandoned at 2,975 feet.

Stephens County

J. M. Dinger and others' No. 1 Torrey, SE cor. SW SE SW, Section 15-2s-7w, is a location. W. F. Smith and others' No. 1 Thompson, SE cor. NW NE SE, Section 17-3s-4w, was abandoned at 1,802 feet. Continental Oil Co.'s No. 3 Dare, SW cor. SE, Section 2-2s-8w, was abandoned at 2,126 feet.

Seminole County

Patrick Drilling Co.'s No. 1 Earles, NE cor. SE NW, Section 32-9-6, is digging cellar. Amerada Petroleum Corp.'s No. 4 A. Chase (twin), NW SW SE Section 29-9-6, is a rig. Same company's No. 5 Chase, NE cor. SW, Section 29-9-6, made 2,322 bbls. from 4,077-4,104 feet. Same company's No. 4 Chase, NW cor. SW SE, Section 29-9-6, was abandoned at 2,690 feet.

Wildcat Operations in Oklahoma

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	S.D. 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	S.D. 5,502 ft.

ATOKA COUNTY

Winham et al's No. 1 Redwine, SE SW SW Sec. 23-1-14	Drlg. 135 ft.
Willis et al's No. 1 Roland, NW NE SE Sec. 6-1-15	Drlg. 910 ft.
Hicks et al's No. 1 Norris, NE NW SE Sec. 15-1-15	Drlg. 285 ft.
Newman et al's No. 1 Bassett, C NW Sec. 18-1-15	Drlg. 165 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w	Drlg. 475 ft.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w	S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	S.D. 3,575 ft.

BLAINE COUNTY

Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w	Drlg. 350 ft.
Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w	S.D. 5,115 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	S.D. 1,115 ft.

CHEROKEE COUNTY

La Piere et al's No. 1 Woods, C SE SE Sec. 27-17-21	S.D. 1,504 ft.

COAL COUNTY

Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8	Landing 5-in. csg. 2,395 ft.
Radial Oil Co.'s No. 1 McGraw, NE NW Sec. 2-1s-8	S.D. 1,450 ft.

COMANCHE COUNTY

G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	S.D. 1,450 ft.

CREEK COUNTY

E. L. Jillson et al's No. 1 Starr, SE NW Sec. 18-15-8	Drlg. 1,340 ft.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w	Location.

ELLIS COUNTY

L. C. Hierek's No. 1 Roper, C SE NW Sec. 21-20-24w	Rig.

GRADY COUNTY

English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE, Sec. 32-3-7w	Show oil 3,255-87 ft.; to test.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	S.D. 5,850 ft.

GREER COUNTY

French's No. 1 Murphy, SW NW Sec. 23-7-21w	S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19	S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-19-9	S.D. 200 ft.

HUGHES COUNTY

Hudspeth et al's No. 1 Harron, NW NE Sec. 3-8-8	Rig on ground.

KAY COUNTY

Bluebaugh et al's No. 1 Indian, C NW NE Sec. 30-25-1	10,000,000 ft. gas 2,556-63 ft.; mudding off gas est. at 5,000,000 ft.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1	Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2	S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w	Rig on ground.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE Sec. 8-7-18w	S.D. 1,418 ft.

LATIMER COUNTY

P. English's No. 1 Unknown, NW SE Sec. 15-6-19	S.D. 1,542 ft.

LINCOLN COUNTY

Sovereign Oil Co.'s No. 1 Flowers, SW SE SE Sec. 14-12-3.	Rig.

NOBLE COUNTY

Wentz Oil's No. 1 Wolff, C SE NW Sec. 17-20-2w	Drlg. 4,094 ft.

OKLAHOMA COUNTY

Sinclair Prairie's No. 1 Kennedy, C SE NW Sec. 4-13-1w	Drlg. 3,370 ft.
Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w	S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w	S.D. 5,515 ft.

OSAGE COUNTY

Mohawk Oil Co.'s No. 1, NE cor. Sec. 10-26-9	1,575-1,633 ft.; shot 120 qts.; oil exhausted.

PAWNEE COUNTY

Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5	S.D. 1,950 ft.

PITTSBURG COUNTY

Tate Oil Co.'s No. 1 Fulton, SE cor. Sec. 34-7-14	Fishing 2,950 ft.
Nelson & Flynn's No. 1 Anderson, NE SW Sec. 12-7-13	S.D. 620 ft.
J. Morrison's No. 1 Fowler, NE SE Sec. 13-7-17	Rig.
C. Kennedy's No. 1 Travis, C SW NE Sec. 15-7-14	Rig.
Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14	Fishing tools 1,620 ft.

PONTOTOC COUNTY

Blackwell Oil & Gas Co.'s No. 1 Abbott, NW SW NE Sec. 14-4-6	Rig.
Williams' No. 1 Krath, NE SE Sec. 33-3-4	Location.
Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6	S.D. 570 ft.
Sunray Oil's No. 1 Grant, SE NE Sec. 11-4-8	Drlg. 1,550 ft.

POTTAWATOMIE COUNTY

Brown et al's No. 1 Sauter, NW cor. Sec. 35-11-4	Digging cellar.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w	S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w	S.D. 3,420 ft.

SEMINOLE COUNTY

Donnelly et al's No. 1 Shepard, SE NE Sec. 4-8-8	Drlg. 820 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Montgomery, SW NW SE NW Sec. 23-9-17w ..... Drlg. 650 ft.
Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 23-9-17w ..... Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w ..... Show oil 2,459-67 ft.; S.D. 2,757 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 ..... S.D. 2,160 ft.

Oklahoma Panhandle

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1E ... T.D. 4,720 ft.; to cement.

Southern Oklahoma

ATOKA COUNTY

Morris et al's No. 1 Ray, NE NW NE Sec. 8-2S-12 ..... S.D. 610 ft.
Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3S-10 ..... Drlg. 2,540 ft.

BRYAN COUNTY

Hughes' No. 1 Ayres, NE SW Sec. 30-7S-7 ..... Drlg. 740 ft.

CARTER COUNTY

Russell's No. 1 Ratliff, NW NE NW SW Sec. 19-1S-2W .... Drlg. 1,770-90 ft.; showing 30 bbls. oil.

JEFFERSON COUNTY

E. S. Bonner's No. 1 Burgess, NE SE Sec. 12-5S-8W .... Drlg. 750 ft.

MARSHALL COUNTY

J. T. Hogan's No. 1 Thompson, NE NW NE, Sec. 26-7S-6 .. Location.

McCURTAIN COUNTY

Prassell et al's No. 1 Wagoner, SE NE Sec. 5-8S-27 ..... Show oil 560 ft.; 620 ft.; drlg. 1,009 ft.
Stampfs' No. 1 Robert Harris, SW NW SW Sec. 14-9S-25 .. S.D. 2,778 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3S-15 ..... S.D. 1,950 ft.

STEPHENS COUNTY

Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-2S-3W .. Rig.
George's No. 1 Ryan, NW SW NW NE Sec. 31-3-15 ..... S.D. 510 ft.

Manager of Bergenport Chemical Works Retires

NEW YORK, Aug. 29.—C. A. Chumar, manager of the Bergenport Chemical Works, and associated with the Standard Oil Co. (New Jersey) for the past 48 years, has just retired from the organization.

Mr. Chumar started with the Bergenport Chemical Works in Bayonne in 1884, remaining there until 1906 when he was brought to New York by the late A. C. Bedford as his assistant on acid matters. He served successively under Mr. Bedford, F. W. Weller, S. B. Hunt, C. G. Black and W. C. Koehler. Upon Mr. Koehler's retirement in 1929, Mr. Chumar resumed the title of manager of the Bergenport Chemical Works.

On Mr. Chumar's arrival for his last day at 26 Broadway he found his office decorated with flowers, and later in the day a delegation of some of the older workers from the Bergenport works presented him with a fine traveling bag. His dinner companions of many years' standing at 26 Broadway presented him with a fitted case.

Tank Wagon Advance In East Coast Market

(Continued from Page 23)

ing the week, and spot sales were reporttd to have shown some improvement, although prices remained quotably unchanged for the period.

Export inquiry continues to lag, however, with much of the inquiry reported centering on the lower melting points of the fully refined grades, and on crude scale. South American buyers have been showing more interest in the market, but relatively little inquiry has been coming from Europe.

Gulf Export Market

An inquiry for a cargo of East Texas crude for September shipment to France was in the market during the last week, but had not been reported closed. A quotation of $1.12½ a barrel was reported made to the French buyers, which was under the price through regular company channels, which figures out $1.30½, Gulf, made up of the base price of 98 cents in the field, 10 cents gathering charge, and 22½ cents freight. An unconfirmed report during the week indicated that 100,000 bbls. of East Texas crude had been sold domestic at $1.10 a barrel, at the Gulf.

There was no trading reported in gasoline or kerosene at the Gulf during the week, and quotations were again nominally unchanged. No cargo inquiries came into the market during the period. Activity was likewise lacking in the Mexican and Venezuelan crude markets.

With efforts apparently abandoned for a working agreement with the Soviet in respect to exports of Russian oil and world market prices, the export trade is looking for intensified competition from Russian oil in many of the world's principal markets, the Soviet apparently having determined to continue the expansion of its foreign marketing operations.

Petroleum Exports

Increased export movement of principal refined products was reported during the week ended August 20, the principal gains occurring on naphtha and lubricating oils, although in the case of the latter the heavier shipments were believed to be due to intercompany movement, rather than any increase in spot business.

The following table shows exports of principal refined products from the port of New York for the past three weeks (all shipments in gallons unless otherwise noted):

	Week ended		
	Aug. 20	Aug. 13	Aug. 6
Gasoline	70,000	10,000	75,000
Naphtha	825,000	60,000	480,000
Kerosene	125,000	15,000	40,000
Fuel and gas oil	.....	.....	35,000
Lubricating oil	1,479,000	590,000	575,000
Petroleum, ref'd.	25,000	75,000	281,000
	Pounds		
Petrolatum	5,000	29,000	.....
Paraffin wax	760,000	1,175,000	210,000
Refined	205,000	35,000	.....
Scale	300,000	125,000	.....
Lub. grease	525,000	605,000	910,000

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended August 20 totaled 556,000 bbls., a daily average of 79,429 bbls., against 841,000 bbls., or 120,143 bbls. per day, for the previous week, and a daily average of 82,786 bbls for the four weeks ended August 20. The week's receipts consisted of 69,000 bbls. at Baltimore, 67,000 bbls. at Boston, and 420,000 bbls. at New York, and were made up of 318,000 bbls. of crude petroleum and 238,000 bbls. of fuel oil.

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf Coast ports for the week ended August 20 totaled 450,000 bbls., a daily average of 64,286 bbls., compared with 500,000 bbls., or 71,429 bbls. daily for the previous week, and a daily average of 36,429 bbls. for the four weeks ended August 20. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast Ports—	
Baltimore	20,000
New York	225,000
Philadelphia	115,000
Others	90,000
Total	450,000
Daily average	64,286

There were no receipts at Gulf ports during the week.

Of the week's receipts, 375,000 bbls. consisted of gasoline and 75,000 bbls. of gas oil.

At the close of the week the Standard-Vacuum Transportation Co. tanker "Brilliant" was reported en route to New York from Los Angeles with 105,800 bbls. of furnace oil.

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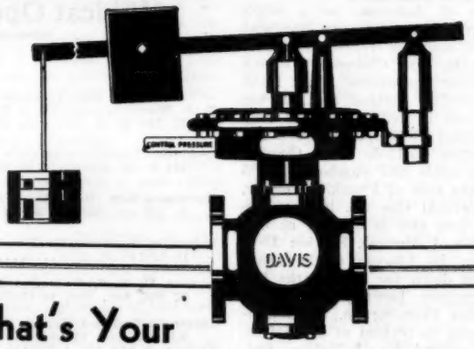

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Show of Oil in Fitzwater Well Gives Impetus to Play in Miller County, Arkansas, Field

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Aug. 29.—The play in Miller County, Arkansas, east of Texarkana, has received impetus during the last week from a good show of oil in Fitzwater and others' No. 1 Beck, Section 33-15-26. After drilling plug from 6-inch casing set at 2,852 feet, the hole was deepened to 2,932 feet, penetrating 6 inches of sand showing oil.

A fair quantity of oil around 30 gravity covered the ditch and pits. Arrangements are being made to set liner and bail from the present depth. The wildcat is about 3 miles south of Lentz and others' tests, drilled about two years ago and one of which produced oil of about the same gravity from around the 3,000-foot level.

Fitzwater and others' No. 1 Fouke, Section 11-17-27, in the southern part of the county, was erroneously reported last week as being the Fred Peterson well. This well has plugged back to 2,300 feet from a total depth of 2,535 feet to make a drill stem test of a gray sand showing gas from 2,252 to 2,300 feet. The Peterson well is now listed as the Duluth-Arkansas Oil Co.'s No. 1 Stone, Section 32-14-26, and is rigging up.

The State of Arkansas as a whole seems to have taken on more life with several other counties represented with active wildcats. In Cleburne County, Frank S. Craver and others' No. 2 Doniphan Lumber Co., Section 34-11-9, has spudded in and is drilling at 238 feet. The Co-operative Development Co.'s No. 1 Ogles, Section 35-13-5, Drew County, is drilling in shale and gumbo at 3,135 feet. In the gas area of Franklin County, the Ozark Natural Gas Co. has set 10-inch at 179 feet and is drilling at 575 feet on its No. 1 Monroe, Section 13-8-29. A wildcat in Lincoln County that has been shut down for six months has resumed operations. Lawrence B. Cook's No. 1 McGehee Planting Co., Section 5-8-17, is reaming to bottom at 2,985 feet. Harrell and others' No. 1 Taffee, Section 25-12s-32w, a recently spudded wildcat in Little River County, is drilling in hard lime at 2,235 feet. In St. Francis County, the Kentucky Oil & Gas Co.'s No. 1 Britton, Section 1-4-1w, is drilling in hard shale at 2,885 feet. There was one dry hole reported from Arkansas during the past week. The Artex Oil Co.'s No. 1 H. A. Goodwin, Section 31-16-15, Union County, encountered salt water in broken sand and was abandoned at 2,139 feet.

North Louisiana

North Louisiana had no unusual developments either in the proven areas or wildcat territory during the past seven-day period. Out of seven completions in this district, three were oil wells, and three were dry holes. A shallow test, northwest of the Haynesville Field in Claiborne Parish, had barren results. W. E. Rembert and others' No. 1 Hunt, Section 18-23-8, tested salt water and was abandoned at 1,452 feet. The test was made for a sand thought to bear oil from the Wilcox, resulting from a show from this formation while pulling casing from an old well in the producing area, adjacent to the present test. The Haynesville production comes from the Blossom sand around the 2,700-foot level.

The Zwolle Field had a better than usual average during the last week, reporting three producers and two dry holes. J. H. Askew's (formerly staked as V. V. Bull) No. 1 Henderson, Section 31-8-10, in the northeastern Many area, was completed flowing 150 bbls. daily through 2-inch tubing from 2,497 feet. In the same area of the field, the Magnolia Petroleum Co.'s No. 1 O. E. Williams, Section 6-7-10, is flowing by heads 70 bbls. daily from 2,490 feet. The well is being rigged to pump, and in all probability will produce around 300 bbls. daily with power. The eastern flank furnished all of the producers, W. C. Turnbow's No. 1 Williams, Section 13-7-11, had an estimated flow of 100 bbls. daily from 2,600 feet. The western and eastern flank of the field furnished one dry hole each. On the northeastern edge, the Pelican Natural Gas Co.'s No. 2 Buckley, Section 6-7-10, was dry and abandoned at 2,807 feet. The test was in close proximity to some recent producers in that area. In the western extension, the Sabine Production Co.'s No. 2 Sabine Lumber Co., Section 3-7-13, was dry and abandoned at 2,450 feet.

May Deepen Blanchard District Well

The Louana Oil & Gas Co.'s No. 1 Cushman, Section 33-19-16, in the newly opened up gas area near Blanchard in western Caddo Parish, tested 250,000 feet of gas on drill stem test from 2,738-97 feet. The test also developed seven fourbles of salt water in 15 minutes, and stands temporarily abandoned at 2,800 feet. There is a probability that the hole will be deepened to a lower horizon. In Red River Parish, the Petroleum Industries, Inc., has reached the contract depth of 2,700 feet and is temporarily shut down and may deepen. A wildcat in Bossier Parish, Breazelle & Steckall's No. 1 Nattin, Section 15-22-14, is nearing the pay horizon. The last drilling reports give the total depth at 2,708 feet in gummy shale, and the sand encountered in the Plain Dealing Oil Corp.'s No. 1 Nattin, one-fourth mile south, had a small flow of oil slightly below 2,900 feet. A wildcat in Tensas Parish that has been shut down for several months has resumed operations. H. V. Schumacher and others' No. 1 Curry, Section 39-11-12, is drilling in sandy lime at 3,610 feet.

There were 13 new locations staked in this district during the past week. Caddo Parish reported two in the semiproven gas and oil districts. The Zwolle Field reported 11 new locations.

Mississippi

The Jackson Field reported one completion, Ridgeway & McGehee's No. 2 Mosal, Section 24-6n-1e, Hinds County, had an initial flow of 31,270,000 feet of dry gas from 2,496 feet. In the Rankin County area, Henslee and others' No. 1 Warner, Section 14-5n-1e, has been temporarily shut in after testing 500 bbls. of low grade oil and 3,000 bbls. of salt water from a total depth of 2,470 feet. The results of this test has stimulated activity in that area as reflected by some wildcat tests to be started at an early date. South of the Henslee well in Section 23-5n-1e, Rankin County, the Howe Oil Production Co. has derrick up for its No. 1 South Jackson Land Co. About 8 miles south of the field, Cleve Love and W. E. Lancaster have derrick pattern on location for their No. 1 Elton Plantation, Section 17-4n-1e. The contract calls for a 5,000-foot test to begin at an early date. This location is in Hinds County, and on a 14,000-acre block. In the Hinds County area, near the field, the Jackson Oil & Gas Co. is rigging up its No. 4 Mayes, in Section 1-5n-1e.

Alabama

In Lamar County, the DeSoto Oil & Gas Corp.'s No. 1 Gardner, Section 22-15s-16w, is making hole slowly with cable tools. The test had limy shale at 3,173 feet and from that depth to 3,179 feet logged gray sand. From 3,179-84 feet, the total depth, shale has been encountered. No further oil has shown up, but the operators are looking for the producing sand in the Amory gas field, about 18 miles northwest, to show up about 3,288 feet. The test in the Amory Field logged about 233 feet from the top of the pink and green shale to the gas sand, and the present test logged the top of the pink shale at 3,055 feet. The best well in the Amory area, No. 1 Harris, had an initial flow of 6,000,000 feet of gas with 512 pounds rock pressure. This well topped the pink and green shale at 2,141 feet and the gas sand at 2,379 feet. Further drilling on the Lamar County test will be watched with interest.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

AVOYELLES PARISH

Company, well, farm name, section and block—	Remarks:
T. J. Woodley, tr.'s No. 1 Thompson & Kolts, 2,640 ft. E, 200 ft. S, NW cor., Sec. 11-3n-5e	Derrick.

BEAUREGARD PARISH

DeRidder Development Co.'s No. 1 McMahan, 158 ft. S, 160 ft. W NE cor. NW, Sec. 33-2s-9w	S.D. 1,265 ft.

BIENVILLE PARISH

Blacklake Dev. Co.'s No. 1 Holstow, 600 ft. W, 100 ft. S, NE cor. SE SE, Sec. 17-18-6	S.D. for wtr. 2,674 ft.

BOSSIER PARISH

Breazelle & Steckoll's No. 1 Nattin, C SW NE, Sec. 15-22-14	Drlg. 2,708 ft.

CADDO PARISH

Louana O. & G. Co.'s No. 2 Cushman, 250 ft. N and E, SW cor., Sec. 33-19-16	Derrick.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4	S.D. 2,712 ft.
Hudson et al's No. 1 Burton, Sec. 35-13-2e	S.D. 1,950 ft.

CLAIBORNE PARISH

Leue Oil Co.'s No. 1 Kinder, Sec. 2-21-7	Rigging up on old well.
W. E. Rembert et al's No. 1 Hunt, 150 ft. N and E, SW cor. E half NE NE, Sec. 18-23-8	S.W. and abd. 1,452 ft.
Robertson & Aurand's No. 1 Smith, 200 ft. S and E, NW cor. SE NE, Sec. 8-21-7	Derrick pattern.

CONCORDIA PARISH

M. M. Stoker et al's No. 1 Gillespie, Sec. 56-3-10	Set 12½-in. 173 ft.

DE SOTO PARISH

Coker et al's No. 1 Boone, 200 ft. N and W, SE cor. SW NW, Sec. 12-10-11	S.D. 60 ft.
Donley & Chastain's No. 1 H. Smith, 325 ft. W, 400 ft. N, SE cor., Sec. 31-14-15	S.D. 2,470 ft.
Honeycut O. & G. Co.'s No. 1 Porter, 423 ft. S, 414 ft. W, NE cor. NW NE, Sec. 26-12-13	Derrick.
S. A. Guy's No. 1 Dowling, 469 ft. E, 382 ft. S, NW cor. NE, Sec. 31-14-14	S.D. 3,970 ft.
E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15	Coring 3,880 ft.
DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-12	Partly rigged up and S.D.
G. C. Smith et al's No. 1 Wollums, 330 ft. N and W, SE cor., Sec. 30-12-13	Drlg. 210 ft.
Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13	S.D. 2,764 ft.
Jack Whitson's No. 1 Sanders, 330 ft. N and E, SW cor., Sec. 19-11-13	Location.

GRANT PARISH

Security Pet. Corp.'s No. 1 Swope est., Sec. 16-9-1e, 1,698 ft. N, 220 ft. E, SW cor. Sec.	W.O.S.R. 1,585 ft.
O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor., Sec. 14-9n-1e	Derrick.

MOREHOUSE PARISH

Feazel & Kalil's No. 1 Davenport, Sec. 33-21-4e	S.D. 119 ft.

NATCHITOCHES PARISH

W. M. Coates' No. 1 Ross Olive, Sec. 16-9-10, 660 ft. S and E from cen. of Sec.	S.D. 2,610 ft.
Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-8, 3,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11	T.A. 1,875 ft.
R. A. Keaton's No. 1 Bastrop State Bank, 200 ft. N and W, SE cor. NE NW, Sec. 17-10-6	Location.
R. A. Keaton's No. 1 Stephens, Sec. 25-10-6, 320 ft. N and W, SE cor. NW NW	S.D. 1,700 ft.

(Continued on Page 59)

Daily Average Runs

There was a net increase of 170 bbls. in the daily average runs from the fields of North Louisiana and Arkansas during the past week. The former gained 260 bbls. while the latter was declining 90 bbls. The daily average runs from the several pools were:

NORTH LOUISIANA

	Bbls.
Caddo, light	5,110
Caddo, heavy	1,900
Cotton Valley	755
DeSoto and Red River	1,880
Elm Grove	510
Haynesville	4,295
Holly	260
Homer	2,800
Pleasant Hill	260
Sarepta-Carterville	870
Uranie	3,700
Zwolle	7,145
Total North Louisiana	29,285
Total previous week	29,025
Increase	260

ARKANSAS

Champagnolle	1,760
El Dorado	3,070
Lisbon	495
Nevada	975
Smackover, light	2,945
Smackover, heavy	24,355
Stephens	610
Urbana	250
Total Arkansas	34,150
Total previous week	34,240
Decrease	90
Total both states	63,405
Total previous week	63,235
Increase	170

Unstable Conditions in California Are Blamed on Failure to Support the Curtailment Program

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Aug. 27.—Although conditions appear to have been relatively stable in California during the current year to date, there has been a very definite deflection in the crude oil curtailment program and a general sympathetic weakening in the marketing situation on the Pacific Coast during the past several weeks. The curtailment committee, headed by William Keck, of the Superior Oil Co., has been unable to reduce crude oil production in California to the established allowable despite the strenuous efforts of Umpire Pemberton. Taking the state production as a whole, current production has been approximating the established allowable of 475,600 bbls. per day, but considering the fact that operators in the Ventura Avenue Field have been underproducing from 8,000 to 10,000 bbls. per day, it is quite obvious that other fields have been consistently overproducing. Those in close touch with the situation do not anticipate any general breakdown on the Pacific Coast in the immediate future but at the same time conditions are not as stable as might be desired. This lack of stability has created a condition of uncertainty, particularly with the advent of the winter season not far removed. The inability to secure effective curtailment has been partly responsible for the condition of uncertainty and this factor has been a contributor to the general weakening which has taken place during the past several weeks. Instead of attempting to strengthen the situation by effective curtailment, several producers have consistently supplied chronic price cutters with either uncurtailed production or oil from storage previously produced.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Aug. 13, 1932		Aug. 6, 1932			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	105,825	15,118	324,833	1,094,502
Gasoline	115,865	16,552	.....	.....	5,388,902	8,977,164
Kerosene	.....	.....	.....	.....	154,372	157,589
Foreign exports—						
Crude oil	69,098	9,871	80,195	11,456	5,164,866	4,719,874
Fuel oil	.....	.....	147,755	21,108	5,394,384	8,999,162
Diesel and gas oil	.....	.....	30,634	4,376	1,005,646	2,453,631
Gasoline	64,953	9,279	245,160	35,023	5,555,458	6,013,208
Kerosene	239,615	34,231	90,082	12,869	1,768,998	1,059,050
Lubricants	.....	.....	.....	.....	.....	36,353
Naphtha distillates	.....	.....	.....	.....	120,075	.....
Coastal-domestic—						
Crude oil	324,112	46,302	301,292	43,042	9,109,382	14,130,217
Fuel oil	192,319	27,474	147,195	21,028	7,562,762	8,281,393
Diesel and gas oil	5,669	810	19,606	2,801	786,285	982,035
Gasoline	459,033	69,862	408,995	58,428	9,836,417	8,765,580
Kerosene	.....	.....	.....	.....	102,396	206,242
Naphtha distillates	.....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	20,550	2,936	322,686	.....
Gasoline	.....	.....	80,435	11,491	578,391	591,439
Lubricants	.....	.....	.....	.....	23,829	27,306
Foreign exports—						
Crude oil	.....	.....	.....	.....	707,651	107,736
Fuel oil	.....	.....	62,610	8,944	644,719	976,583
Diesel and gas oil	35,230	5,033	58,420	8,346	519,332	294,708
Gasoline	117,421	16,773	91,089	13,013	2,367,717	2,869,372
Kerosene	.....	.....	2,260	323	744,020	548,188
Lubricants	.....	.....	.....	.....	24,934	.....
Naphtha distillates	.....	.....	.....	.....	.....	20,100
Coastwise-domestic—						
Fuel oil	55,985	7,869	86,238	12,320	1,872,055	2,599,899
Diesel and gas oil	.....	.....	.....	.....	238,094	278,159
Gasoline	103,532	14,790	158,992	22,913	2,391,138	2,407,114
Kerosene	.....	.....	.....	.....	80,467	212,543
Naphtha distillates	.....	.....	.....	.....	.....	49,780

Kettleman Hills

Unless something unforeseen develops, the North Kettleman Oil & Gas Co. should be in a position to determine the potentiality of the extreme western end of the Kettleman North Dome, as the bit in the company's No. 1 Lillis Welch is rotating ahead a little below the 8,200-foot level. The top of the Temblor was logged in this well at 8,011 feet and while the hole will probably have to be carried down to around the 8,800-foot level for completion, cores taken previous to this time should reveal the outlook as far as production is concerned. The outcome of work on No. 1 Lillis Welch is of prime importance because it may have a decided effect on future drilling in this end of the structure. If commercial production is developed, and the well seems to have a fair chance, it will lead to additional drilling in the area intervening between this location and the present limits of production.

The Kettleman North Dome Association's well, No. 81-10 P, a recent completion brought in flowing 3,276 bbls. of exceptionally clean 38.1 gravity oil per day, has been beaned back to 1,030 bbls. This new well was bottomed at 8,551 feet and finished with a 6⅝-inch liner landed at 8,545 feet and cemented through perforations at 7,941 feet. Kenda's well, No. 36-30 J, which recently tested wet on a production test at 8,699 feet, is being conditioned preparatory to being carried on down as a deep test. This well, located on the south flank of the structure in the extreme western end of the field, only found approximately 30 feet of oil sand and the failure to develop commercial production was therefore not surprising. If Kenda decides to carry this well down as a deep conclusive test it may throw considerable light on the possibility of developing production below the present productive horizon in the North Dome. The Kettleman North Dome Association is expected to make a production test on No. 76-34 Q some time during the course of the next several weeks, and this well should be followed into production by well No. 38-34 J and No. 81-4 P about a month later. The Associated has concluded drilling operations on No. 3 Whepley in the North Dome at 8,790 feet and this well should be tanking oil within the ext day or two as the liner has just been landed. The Powell Stockton Investment Co. failed to effect a satisfactory water shut off in No. 1 Courtner, bottomed at 7,574 feet with an 8⅝-inch water string landed at 6,648 feet, and the hole has been cemented for the third time. In the Middle Dome of Kettleman Hills, both the Standard and the Petroleum Securities are still held up with mechanical trouble, the former's well, No. 6-29 V, fishing for drill pipe at 8,406 feet, and the latter's No. 1 Burbank cleaning out at 5,150 feet with bottom of the hole at 9,332 feet.

San Miguelito

The Continental Oil Co.'s No. 1 Grubb, which recently discovered a new deep zone in the San Miguelito Field of Ventura County, has been holding up exceptionally well since completion a few weeks ago at 7,197 feet, with the result that Umpire Pemberton has given the well a potential of 2,440 bbls. per day. Subsequent to the completion of this well, the Continental applied to the umpire for an adjusted allowable as the previous allowable of the well was only 150 bbls. per day. In conformity with this request, the umpire gave No. 1 Grubb a daily allowable of 1,000 bbls. and increased the field's allowable from 100 to 1,100 bbls. per day. The Continental has been reducing the production of No. 1 Grubb for the past two weeks and has just reached the newly established allowable. Before being curtailed to the new allotment, the well was producing 1,485 bbls. of clean 30.8 gravity oil and 910,000 feet of natural gas per day from 7,145 feet under a casing pressure of 1,655 pounds. Warren J. Miller should begin making hole in his No. 1 Valenzuela some time during the next week or 10 days and this project, located in the southwestern part of the field, may bear watching as it should result in commercial production if the subsurface formation is at all uniform. Miller acquired this lease from the Continental Oil Co., the latter retaining an overriding royalty, and is at present completing preparations for early work. Due to stringent lease requirements and offset obligations on the part of the Honolulu Consolidated, Miller was obliged to shift the original location a distance of 30 feet after the location had been graded and roads constructed to facilitate transportation of drilling equipment. A shift of 30 feet does not ordinarily require more than a week or so but in this case it involves considerable work due to the rough terrain. In shifting the location 30 feet northwest, Miller also acquired some additional elevation and a little cash as recompense for the additional expenditure necessary.

Ventura Avenue

Indications point to the starting of several new wells in the Ventura Avenue Field during the course of the next 60 days. The General Petroleum has just spudded in No. 15-A Barnard, a projected deep zone completion, and the Shell Oil Co. is expected to begin making hole in No. 74 Taylor, which may also be carried on down for a deep test of the recently discovered 83 zone found by the Associated Oil Co. in two wells. The Associated's last completion in the deep zone was No. 83 Lloyd, which a few days ago was producing 3,415 bbls. of clean 31.5 gravity oil and 2,825,000 feet of natural gas per day through two forty-two-sixty-fourths-inch beans from 9,700 feet. In addition to working on three wells on the Lloyd property, the Associated is making preparations to drill two new wells, Nos. 21 and 26 on the Ventura Land & Water Co.'s property. The Union Oil Co. successfully completed No. 51 Newlove in the Santa Maria Field of Santa Barbara County, pumping 151 bbls. of exceptionally clean 24.8 gravity oil per day from 3,450 feet.

The Indian Petroleum Co. has staked location for a new tideland test to be drilled on State Permit No. 82 in the Rincon Field of Santa Barbara County and material is being shipped for construction of the well head. The location of this projected test is near the westerly extension of the axis of the Rincon structure and present plans call for the construction of an isolated pier or platform. The drilling of this well will be of more than passing interest as it is the present intention to locate all drilling equipment at the well head. The Casitas Oil Co.'s No. 1 Schudde, located on state tideland permit No. 202 in the Carpinteria area of Santa Barbara County, is another interesting tideland project scheduled to get under way in the near future. In the Coal Oil Point area, located at the first promontory a few miles east of the prolific Elwood Field, the Equity Oil & Gas Co. is drilling a test on state tideland permit No. 159. The

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status:
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	7,414	cleaning out
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Co-operative Dev. Co., No. 1 Del Rey, Los Angeles Co.	26- 2-15	4,470	sd. sh. drilling
Hogan, N. S., No. 1 Hawthorn, Los Angeles Co.	23- 3-14	101	suspended
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	20- 3-14	6,378	suspended
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7- 2-14	4,850	sd. sh. drilling
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17- 2-14	4,090	suspended
Kyle, W. A., No. 1 Inglewood, Los Angeles Co.	7- 2-14	4,318	fishing
Pacific Western, No. 16 Inglewood, Los Angeles Co.	8- 2-14	2,900	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	2,860	suspended
Jones, W. L., No. 1 Bell, Los Angeles Co.	31- 2-12	1,593	suspended
Weist Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	4,902	suspended
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	5,060	suspended
McNeil, A. W., No. 1 Montebello, Los Angeles Co.	7- 2-11	rig	suspended
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,319	suspended
Caballero Estates, No. 1 Calabasas, Los Angeles Co.	23- 1-16	1,604	suspended
Marble, Willard, No. 1 Chatsworth, Los Angeles Co.	4- 2-16	1,395	suspended
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34- 3-16	3,174	sd. sh. drilling
Ajax Pet., No. 1 Newport, Orange Co.	21- 6-10	7,259	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	1,970	suspended
Mineral Expl., No. 1 Capistrano, Orange Co.	8- 8- 7	1,742	sd. sh. drilling
Orangethorpe Pet., No. 1 Brea, Orange Co.	32- 3-10	4,497	sd. sh. drilling
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,590	suspended
Duncan, N. L., No. 1 Sagebrush, Riverside Co.	8- 4- 6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	3,392	suspended
Great American Pet., No. 1 Chino, San Bernardino Co.	18- 2- 8	....	material
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	676	sd. sh. drilling
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-11-16	769	sd. sh. drilling
Borderland Oil Co., No. 2 Encinitas, San Diego Co.	29-16- 4	2,677	suspended
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	1,243	suspended
Shannon, G. H., No. 1 Kearney, San Diego Co.	14-15- 3	446	suspended

Bolsa Chica's well, No. 1, on state tideland permit No. 191 in this same area, is being redrilled at 3,265 feet preparatory to perforating the casing for a test of the Temblor at this point. The Superior Oil Co. carried this well down into the underlying Sespe at 5,510 feet but, upon failing to find any evidence of commercial production, returned the hole to the Bolsa Chica. This wildcat cored some fairly good looking sand in the Vaqueros around the 4,000-foot level but this was so successfully mudded off because of inefficient drilling that the subsequent production test was inconclusive to say the least. This well did not show any great gas pressure while drilling through the Vaqueros, but at the same time the formation cored reacted favorably in another test and showed a very strong petroleum odor. Regardless of the outcome of the present attempt to develop commercial production in the Bolsa Chica's present well, this area warrants another test, located possibly somewhat to the east.

Fruitvale

The General Petroleum successfully completed No. 3 Hensley, a new well in the Fruitvale Field of Kern County, and this project, bottomed at 3,925 feet and finished with a 6⅝-inch liner carrying 278 feet of perforated, was brought in flowing 791 bbls. of clean 22.5 gravity oil through a seven-eighths-inch bean under a casing pressure of 615 pounds. The Mohawk Petroleum Co. did not experience the same degree of success as the General Petroleum as its well No. 11, bottomed at 4,089 feet and completed with a 4½-inch liner including 280 feet of perforated, was only good for 350 bbls. of fluid cutting a little in excess of 30 per cent. This well was completed through a one-half-inch bean and while the gas pressure was all that could be desired, the output has been slow in cleaning up. It is believed quite probable that the Mohawk will re-enter the hole and undertake remedial work as a superficial survey indicates the probability that the 6⅝-inch water string has been landed a little too high in the hole. Immediately upon the completion of well No. 11, the Mohawk started rigging up rotary equipment in well No. 12 and this project is expected to be spudded in some time during the course of the next few days. The Kern Petroleum Corp. is also making preparations to begin making hole on a new well which is located in Section 21-29-27. The Western Gulf is expected to recomplete No. 1 Bittle on the beam some time within the next few days and No. 2 Bittle will be given an early test, provided that the suspected hole in the casing is not confirmed.

Lost Hills-Belridge

Drilling operations in the Lost Hills-Belridge Field have shown a slight increase during the past few weeks and a little further work may be anticipated in the near future. The Continental has just spudded in No. 3 Result, a new well, and while this project will not be carried down to the recently discovered deep zone, the hole will be finished with pipe sufficiently large enough to permit this work when developments warrant. The Union Oil Co. recently killed No. 17 Belridge in the North Belridge Field of Kern County and an attempt is being made to stimulate production at its present depth of 5,604 feet. After being cleaned out the well showed an increase of approximately 10 bbls. per day, which hardly justifies the additional work as this added production was the result of intermittent swabbing operations. It is quite likely that the company will deepen this hole unless a substantial increase is recorded in production during the normal course of work. The Ohio Oil Co.'s No. 1 Bloemer, bottomed at 6,061 feet with a string of 9-inch casing landed at 6,052 feet, is scheduled to be drilled ahead to at least 8,000 feet upon the resumption of work as the company is desirous of ascertaining the potentiality of this property before quitclaiming it. The Belridge Oil Co. is rotating ahead in two wells in the North Belridge Field and one of these projects, well No. 27-35, is expected to be listed for early completion unless the company subsequently decides to carry it on down into the new 64 zone, located at approximately 8,000 feet. There have been some discussions among operators interested in the Lost Hills Field but this projected work is still in a formative stage. It is quite likely, however, that at least one well will be started in the Lost Hills area within the next three or four months unless general conditions render this work inadvisable.

Long Beach

Three wells were put on production in the Long Beach Field during the past week, the most successful of which was the Drillers Petroleum Corp.'s No. 1 Bernstein, which was put on the beam at 4,912 feet and recompleted pumping 236 bbls. of exceptionally clean 27.1 gravity oil per day. No. 1 Sterling of the L. W. S. Oil Co. was brought in pumping 75 bbls. per day from 4,408 feet but the output is cutting approximately 30 per cent and is therefore rather unsatisfactory. S. S. Whortley's No. 3 Painted Hills, originally started by the M. & A. Oil Co., was recompleted after being plugged back from 4,961 feet to 4,706 feet and returned to production pumping 48 bbls. of 26.3 gravity oil cutting 20 per cent water. There is practically no new drilling under way in the Long Beach Field at the present time, although there are a number of reconditioning jobs under way.

Inglewood

The Pacific Western Oil Co. has temporarily suspended drilling operations in No. 16 Rubel in the Inglewood Field of Los Angeles Basin at 2,900 feet and it is believed that this well, even though subsequently completed, will be kept off production. It is inteersting to note, however, that the Pacific Western's new well on the Rubel property has been finished in the second zone and is therefore in a position to go on production at any time. A string of 9-inch casing was landed below the upper or present productive zone at 2,540 feet. The landowners recently served notice on the Pacific Western to produce the second zone as an engineering survey indicated the probability that over 1,000,000 bbls. of oil had been unintentionally drained from beneath the Rubel lease by operators holding adjacent acreage. In order to remove any doubt and thus eliminate the necessity of producing the second horizon in the Inglewood Field, the Shell Oil Co. plugged back No. 9 Rindge to 2,848 feet a few weeks ago. This well of the Shell is believed to have been producing from the second zone for several years, although

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IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status:
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	unsurveyed	2,733	gr. sd. drilling
Barnsdall, No. 1 Los Alamos, Santa Barbara Co.	31- 8-33	5,331	recemented
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-33	10,294	fishing D/P
Wilson, N. S., No. 1 Los Alamos, Santa Barbara Co.	2- 7-35	4,979	suspended
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24- 4-30	3,641	br. sh. drilling
Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	25- 4-29	5,510	redrilling
Western Seaboard, No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	suspended
Oakburn Oil Co., No. 1 Capitan, Santa Barbara Co.	tideland	2,821	cleaning out
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Casitas Oil Co., No. 1 Carpinteria, Santa Barbara Co.	tideland	....	building pier
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	4,100	sd. sh. drilling
Indian Pet., No. 1 Rincon, Ventura Co.	tideland	....	building pier
Miller, J. W., No. 1 Miguelito, Ventura Co.	23- 4-24	....	material
Bell, H. H., No. 1 South Mountain, Ventura Co.	22- 3-21	2,484	abandoned
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	....	material
Superior Oil Co., No. 1 Timber Canyon, Ventura Co.	13- 4-21	3,416	sd. sh. drilling
American Oil Co., No. 1 Conejo, Ventura Co.	33- 2-20	2,050	fishing
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	suspended
General Pet., No. 2 Buttonwillow, Kern Co.	6-28-25	mtl.	building rig
Purman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	4,610	suspended
Welport Oil Co., No. 2 McKittrick, Kern Co.	19-29-21	606	br. sh. drilling
General Pet., No. 1 Belridge, Kern Co.	30-28-21	3,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Rio Cal Pet., No. 1 Shale Hills, Kern Co.	2-27-18	2,355	suspended
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,225	suspended
Hollaway, A. S., No. 1 Devils Den, Kern Co.	11-25-18	477	sd. sh. drilling
Hannah, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,516	cleaning out
Pyramid Hills Oil Co., No. 1 Devils Den, Kern Co.	24-25-18	1,724	recemented
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	3,170	suspended
Regina Oil Corp., No. 1 Mojave, Kern Co.	26-10-14	3,150	hd. sd. drilling
Meridian Oil Co., No. 1 Mojave, Kern Co.	11- 9-15	4,000	suspended
Harding, J. B., No. 1 Mojave, Kern Co.	5-10-10	1,030	redrilling
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Descanso Oil Co., No. 1 Tejon, Kern Co.	31-11-19	2,749	suspended
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,970	suspended
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo	3-32-22	2,693	suspended
Emerich Oil Co., No. 1 Carrizo Plains, San Luis Obispo	22-32-22	1,981	cleaning out
Trav-El Oil Co., No. 1 Carrizo Plains, San Luis Obispo	7-32-22	2,450	suspended
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	26-31-12	3,352	suspended
Martin, J. D., No. 3 Edna, San Luis Obispo Co.	5-31-13	340	sd. drilling
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-12	1,650	suspended
Shell, No. 1 San Miguel, San Luis Obispo Co.	4-25-12	561	sd., drilling
Pacific Inland, well No. 1, Monterey Co.	19-23-15	2,441	hd. sd. drilling
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Thomas Pet. Co., No. 1 Parkfield, Monterey Co.	31-22-14	198	suspended
Guess, E. B., No. 1 Cochran, Kings Co.	7-21-21	6,197	suspended
Woodward, Glen, No. 1 Dudley Ridge, Kings Co.	32-22-20	569	rigging up
Scott Bros. Drlg. Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,843	suspended
Lacal Nat. Gas Co., No. 1 Dudley Ridge, Kings Co.	32-22-20	341	suspended
Ketleman Nat. Gas Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,100	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	suspended
Triune Oil Co., No. 1 Dudley Ridge, Kings Co.	5-23-20	1,098	reaming
Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co.	9-23-20	rig	suspended
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	1,342	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,694	fishing
Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co.	10-23-16	1,148	cleaning out
Mid-Calif. Oil Co., No. 1 Avenal, Kings Co.	11-23-16	....	grade
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	5,060	suspended
Guess, E. B., No. 3 Dudley Ridge, Kings Co.	12-23-22	1,840	suspended
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	2,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Sheldon & Gholson, No. 1 Porterville, Tulare Co.	34-22-27	899	cemented
Hayman Oil Co., No. 1 Porterville, Tulare Co.	17-23-28	380	suspended
Gravity Expl. Co., No. 1 Alpaugh, Tulare Co.	11-24-23	2,207	abandoing
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,490	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	3,055	sd. sh. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,800	sd. sh. drilling
Hilterbrandt, R., No. 1 Crows Landing, Stanislaus Co.	36- 7- 6	1,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20- 3-13	2,632	sd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-12- 3	3,045	suspended
Easton & Monell, No. 1 Colma, San Mateo Co.	25- 3- 6	3,130	suspended
Bergman, Harry, No. 1 Dos Palos, Merced Co.	12-12-11	....	material

its exact status has been somewhat in doubt due to a fault which has displaced the formation in the immediate area. The Baldwin Hills Oil Co. is rotating ahead in No. 9 Brownmoor, an edge well in the Inglewood Field at 4,825 feet, but has not yet succeeded in finding anything which would justify a production test.

In the Dominguez Field, the Republic Petroleum expects to make another production test on No. 3 Childs, an edge well which up to the present has not shown any commercial production due to the presence of edge water. The Republic Petroleum acquired a lease on the Childs property within a short time after the Shell Oil Co. had quit-claimed its lease due to the inability to develop satisfactory production. The Union Oil Co. is drilling one well in the Dominguez Field at the present time and is expected to resume work on another project after the completion of No. 5 Carson, which is scheduled for early completion. The Wilshire Annex Oil Co. is attempting to straighten the hole in No. 1 Neace, which a recent survey showed to be approximately 400 feet off the perpendicular, a rather chronic condition in the Potrero Field. The Wilshire is using a removable whipstock in this well at 6,500 feet but has not yet accomplished its objective. The Wilshire is drilling two other wells in the Potrero Field at the present time but neither project looks any too promising. In the Rosecrans Field, L. R. Knowlton successfully recompleted his No. 1 Athens pumping 232 bbls. of clean 37.8 gravity oil and 70,000 feet of natural gas per day from 4,500 feet, the hole having been plugged back from 5,280 feet to 4,500 feet. The Ring Petroleum Co. is coring ahead in its No. 1 Cobb in order to definitely locate the Meyer zone in this project located in the Santa Fe Springs Field. This well was originally drilled by the Petroleum Producers Syndicate's No. 1 and while originally finished in the Bell zone, was never carried below this point. The Ring Petroleum, which recently acquired the well in question, expects to develop commercial production in the Meyer zone, which incidentally, is one of the best producing horizons in the Santa Fe Springs Field at the present time.

The Hay Petroleum Corp. is making preparations to start a new well in the Weed Patch area, located in the extreme southern part of the San Joaquin Basin, and rig construction is expected to get under way some time during the next 15 days. This area has been comparatively dormant for more than a year due to the fact that the Shell Oil Co. was unsuccessful in developing commercial production after a rather extensive drilling program. It might not be amiss to mention, however, that the Weed Patch area will again enter the picture at some future date as the Shell's work definitely indicated the existence of a new field at this point. It will be recalled that the Shell got a 2,000-bbl. well over a year ago but killed the flow in order to drill ahead and determine the possibility of developing deep production. The Shell was never able to recomplete this project after it was plugged back and the company accordingly suspended drilling operations. The natural flow of the first well indicates the existence of a fairly substantial accumulation, however, and we may anticipate the development of commercial production in this district whenever the Shell deems it advisable to resume operations. Several dry holes were drilled north and west of the Shell's discovery well but this work was more or less unsatisfactory and does not necessarily condemn the entire area. As a matter of fact, the Shell Oil Co.'s well looked exceptionally good during its brife production test.

TO BUILD NEW LINE

NEW YORK, Aug. 29.—The Bradford Transit Co. is planning the construction of a 3-inch crude oil line between Obi and Myrtle, in Allegany County, New York. The Transit company is controlled jointly by the Tide Water Oil Co. and the South Penn Oil Co.

Director of Oil Sales

H. K. BROWNING

H. K. Browning, formerly division manager on the Pacific Coast for A. M. Byers Co., has been made director of oil country sales for the company with headquarters in Pittsburgh. The creation of this position does not in any way affect the company's present division office setup but is an additional to its personnel for the purpose of co-ordinating oil country sales activities between its various offices. Mr. Browning is spending some time in Oklahoma and Texas for the purpose of gathering first hand information necessary to successfully carry out his duties.

MADE 35 BBLS. AN HOUR

Magnolia Petroleum Co.'s No. 1 Broadbeck in the North Government Wells Field in Texas was recently reported as producing 35 bbls., leaving the inference that it was 35 bbls. per day. The well came in with an initial production of 35 bbls. per hour.

Though the information has already been published, due to additional inquiries it should be published again that the name "Government Wells" was given the producing district in northern Duval County by the San Antonio Geologists' Society from the U. S. Government water wells drilled near there many years ago. During a drouth period when ranchmen were broke, the Government drilled water wells and secured water sufficient to water the live stock and carry it over.

NEW MAP ON TEXAS

The Zingery Oil Map Co., Fort Worth, has just completed two combination maps on Southeast Texas and the Southwest districts. One map covers the counties from Victoria County, Texas, to the Louisiana line, and the latter covers the area from Victoria County to Laredo on the Mexican border. Both maps cover the entire Renoysa-Lagarto trend, and extend over about 80 counties, showing all salt domes in the two area,s and all dry holes and producers.

One Good Well by Pure Oil and Two Failures in Midland, Michigan, Field

By GEORGE A. WHITNEY

MOUNT PLEASANT Mich., Aug. 26. Owing to the great depth that oil is found in Michigan, it is slow work in bringing wells into the Dundee formation where the largest production is found. One good well was brought in by the Pure Oil Co., in a second test, 330 feet from the north and east lines of the John J. Bolen farm, in the W half W half NW, Section 16, Greendale Township, Midland County, the well showing an initial production of 1,300 bbls.

W. Hunter Atha, well known Central Ohio operator, drilled in a test 660 feet from the south and west lines of the Thomas A. Murphy farm, in the SW NE, Section 22, Richmond Township, Saginaw County, and failed to find a commercial producer in the Dundee formation.

Atha Drilling Co.'s test on the Chemical State Savings Bank property in the SW SE, Section 21, Ingersoll Township, Midland County, topped the Dundee formation at 3,445 feet, and drilled the hole to a total depth of 4,613 feet, or 1,165 feet below the top of the Dundee, finding nothing.

The Isabella Oil & Development Co. brought in No. 3 Keeler-Mitchell, C SW NE, Section 9, Broomfield Township, Isabella County. It was reported with a volume of 1,250,000 feet of gas from the Marshall formation, the company is planning to start another test which will be located on the 40 acres adjoining the Bartlett farm, in Section 3, same township.

The Pure Oil Co.'s No. 5-B A. Bernard, 330 feet from the south line and 990 feet from the east line of the farm, SE SE, Section 9, Greendale Township, Midland County, which produced 100 bbls. a day in the Traverse formation, quickly dropped to a small production and is now being drilled to the Dundee formation.

In the Mount Pleasant-Midland Field, the Pure Oil Co. is drilling in the Dundee formation, in No. 3 well, in the northeast corner of the W. A. Cassidy farm, E half NW, Section 16, Greendale Township, Midland County. Same company's No. 1 A. Seeley, SW cor. of the farm, SW SE, Section 9, same township, which is close to 3,000 feet, and the same company's No. 3 Purtell, 990 feet from the north and east lines of the farm, close to 2,700 feet. No. 4 Purtell down around 2,200 feet, both in Section 15, same township. No. 4 Emma O. Reed, Section 10, same township, is drilling close to 1,800 feet.

Gordon Oil Co.'s No. 5-B well, in the northeast corner of the N. J. Skinner farm, NW NE NE, Section 16, Greendale Township, Midland County, has been delayed by a fishing job at 3,200 feet. Wellman Oil Co.'s second test on the John Bolen farm, SE SE NE, Section 14, same township, is drilling below 3,000 feet; the Old Dutch Refining Co.'s No. 1 John Opperman farm, SW SW SE, Section 12, same township, drilling below 3,000 feet; Braden-Sanders' No. 3, on the Kate Stapleton, NW SW NE, Section 13, drilling at 2,750 feet; Jones-Woodruff's No. 2, on the Jones-Woodruff farm, NE SE NW, Section 13, and in the northeast corner of the lease, reported drilling below 1,200 feet; Talbot Oil Co.'s No. 3-S State land, NE SE SE, Section 10, Greendale Township, drilling below 1,700 feet.

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Chattanooga, Tennessee, U.S.A.

Rosenberg's Pool Believed Likely to Develop Into One of Most Important in Laredo District

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Aug. 29.—Rosenberg's Pool in Webb County is beginning to attract more attention and is likely to develop into one of the most important in the Laredo district. The operations are now carried as the South Texas Oil Co. and the No. 7 Laurel, which is the farthest north, came in at 2,248 feet for around 275 bbls. a day. Pipe line has been built by Rosenberg to Oilton, about 3 miles south to loading rack and he is getting $1.25 a barrel at Oilton for his crude.

Contour lines drawn on the Mirando sand indicate a possibility of this pool merging with the Carolina-Texas Pool, which is about 3½ miles northeast. At least the Rosenberg area could extend both northeast and southwest. Thus far the field consists of four oil wells at around 2,240-48 feet, one gas well at 360-70 feet, and one abandoned hole, all within a space about a quarter of a mile square, and one dry hole about half a mile west at a depth of 2,542 feet. The abandoned test has since been proven to be in productive territory by producers drilled on two sides of it.

One of the tests to watch in connection with the development of this field is the Montex Oil Co.'s No. 1 Vela in the northeast corner of Survey 267 and immediately west of the Carolina-Texas Field. What it finds will have much to do with determining the geology of the situation and whether or not the two fields will merge.

Newton's No. 1 Garcia, in the center of Survey 52, 2 miles due north of the Rosenberg producers which got some gas at 1,200 to 1,208 feet, is also watched with interest, as it will help to define the geology.

Southwest of the Rosenberg producers some 4 miles O. W. Killam is in a sand at 1,505 feet with a showing of oil and preparing to make a test that may result in still another new pool, separate from Rosenberg's and in a different sand. Without waiting for the completion of his first test Killam started drilling the second. The No. 1 on this block was carried as the No. 1 Smith, in Block 6 of Survey 1,110, and after getting the showing at 1,500 feet was carried down past the sand producing in the Rosenberg area and abandoned. The second test is carried as the No. 2 Hoogterp.

Completions Add to Production

Excepting announcement of some new Government Wells wildcats on the northeast up the Reynosa Escarpment and the probability that another effort will be made to develop a new pool in the vicinity of the Buchanan & Tyrrell No. 1 Hagist in northern Duval, the Government Wells district in the last week recorded some new completions on inside locations and added to production but developed nothing of importance, especially in the northern end of the district.

In the southern end of the district, Edwin M. Jones' No. 1 Williams, in the north corner of Survey 131, and more than half a mile south of production and so far west that it was feared it would make a gas well, was reported late in the week to have a good showing of oil, though this was not official. If it makes an oil well it will be the biggest thing nearly that has happened in that end of the field since the bringing in of the discovery well as it will begin to give the field some real length. All the other tests in the field are within a length of little over a half mile, and this test is the farthest to the south.

Buchanan & Tyrrell abandoned at 2,505 feet, the contract depth, their No. 1 Hagist in Survey 267, 8 miles north and 2 miles east of the north Government Wells Pool which had two sands with a volume of gas, the first at 2,110-22 feet and the other at 2,134-44 feet. They were estimated as good for 3,000,000 to 10,000,000 feet and correspond to the two sands in the North Government Wells Field, the upper of which carries gas, and the lower, oil. The showing was so good that there probably will be some new deals worked out for more drilling on the Hagist ranch in that district. The industry has been attracted to the district and Andy Lacey has spuddded in his No. 1 Hagist in McMullen County, about 3 miles nearly due northeast from Buchanan & Tyrrell's No. 1 Hagist in Duval County. The Lacey test is about a mile east of Loma Alta, a high hill that is a geological landmark in that territory, and 330 feet from the north and west lines of R. W. Mills Survey No. 467. Roy Baker and L. W. Capps are understood to be arranging to drill a test a little west of it. The Lacey test was first announced as the Jaqua & Crow No. 1 Hagist.

Bee County

The Texas Company got almost 50 feet of sand in its No. 1 Cox, a west offset to the discovery well in the new Tuleta Field in Bee County and the first test to reach the sand since the completion of the discovery well. It got the sand at 4,082-4,130 feet and set casing after a drill stem test showed gas and a little oil. It was about ready to drill in over the week-end. The discovery well got the sand at 4,082 feet also and stopped drilling in sand at 4,094 feet. The Texas Company set casing at 4,090 feet, a little lower than in the discovery well and may be able to cut off some of the gas production.

At the close of the week Coquat & Hawn about 1,000 feet south of the discovery well topped the sand at 4,083 feet and O'Neil and C.R.M. Drilling Co.'s No. 1 Harris, 660 feet east and 250 feet south of the discovery well, topped the sand at 4,062 feet. Completion of these three tests will give somewhat of a line on the field. They are the only ones drilling except the L. L. Smith No. 1 Harris, 660 feet south of Coquat & Hawn, which has just got started. However, J. Stanley Smith's No. 1 Weiss, about 2 miles northeast of the discovery well and a half mile southwest of the three Price tests on the Weiss land, is rigging up and is an important test. Price in each of his three wells got a good showing of gas. The No. 1 Weiss in sand at 4,411-14 feet was estimated to be good for 20,000,000 feet of gas, with elevation of 345 feet compared with elevation of 320 feet in the Nichols discovery well in the Tuleta Field. The J. Stanley Smith test is in line with the trend as worked out by geologists.

A line of wildcatting about 10 miles southeast of the Tuleta Field is being watched closely. The Howeth & O'Neil No. 1 King last reported at 3,943 feet ought to be topping the Jackson soon. Nine miles south and on the same general line of faulting that is said to extend up to the northeast in Goliad County, C. F. Nichols, who drilled the discovery wells at Tuleta and Normanna, and Harry Bruner are starting the No. 1 Heldenfels, recently spudded in. Just a little to the southeast of the center of this line the Gulf Coast Oil Co.'s No. 1 Webb Hearn and the Humble and Hurlburst No. 1 Wood got some important showings of oil and gas.

Bastrop County

Parsons & Mayfield's No. 1 Carroll, 10 miles southwest of the town of Bastrop in Bastrop County, got a good showing of oil in Serpentine at 2,300 to 2,385 feet and set casing and was due to drill in and test over the week-end. The oil was black and heavy compared to green oil and 37 gravity found in the Dale Field 6 miles southwest and the Yoast Field 6 miles northwest, each of which is producing in the Serpentine.

George E. Smith's No. 1 Behring, 450 feet west and 300 feet south of the discovery well of the Sal-Mar Field in Guadalupe County, 6 miles east of Seguin had a good showing in chalk topped at 2,013 feet and with total depth 2,023 feet. He is arranging to set casing and make a test. This is about the same depth as the chalk production in the discovery well and is the first test drilled since to get anything of a showing in the chalk. It had been planned to drill it to the Edwards lime.

Other than these the Balcones fault zone is waiting for the Paton Brothers' test in northern Lee to finish a bad fishing job and for Eiser in Milam to make more hole before reaching interesting depth and giving a lot of thought to the big deal of the Amerada Petroleum Corp. which is rigging up and drilling a water well on the Halsel Survey, 10 miles southwest of Pearsall in Frio County. This is a wildcat on an 85,000-acre block of leases that the Amerada has been working 2½ years on. Geological field work consumed that much time. Besides that geophone seismograph and magnetometer were used. More than 150 ownership tracts are in the block and it stretches 30 miles southwest from Pearsall into Zavala County and is from 3 to 5 miles wide. Other than the leasing of some big ranches of single ownership this is the biggest deal that has been attempted in Southwest Texas. There has been practically no wildcatting in this territory. A few tests were drilled in northern Frio County and also northern Zavala County. The Edwards is expected at around 1 mile in depth and the test may continue to the Trinity if the Edwards or other shallower formations than the Trinity fail to produce.

Coast Counties

John F. Camp and Stanolind Oil & Gas Co.'s No. 1 Bennett, in nothern San Patricio County, was a disappointment. It had a good showing in sand at 4,567-94 feet, drilled to a total of 4,750 feet and plugged back to 4,590 feet and tested but the volume of gas was considered too small and it may be abandoned.

There is additional interest in the zone northeast and southwest at about that distance from the gulf, however, F. A. Lain's test in northeastern Jim Wells County has rebuilt the derrick that blew down and is about to resume drilling.

Wildcat Operations in Southwest Texas

Week Ending August 26

Company, farm and location—	Remarks:
ATASCOSA COUNTY	
American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1, Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset	T.D. 1,660 ft.; standing.
Etheridge et al's No. 1 McCowen-Dickinson, Campbell-Berry Sur.	T.D. 375 ft.; drlg.
BANDERA COUNTY	
F. A. Brown's No. 1 R. B. Watson, 600 ft. N of cen. of S line of Sec. 71	T.D. 320 ft.; drlg.
BASTROP COUNTY	
Marts & Beavens' No. 1 A. Neidig, 150 ft. from E line, 525 ft. from N line of tract in J. Burleson Sur.	T.D. 2,000 ft.; drlg.
Parsons & Mayfields' No. 1 Carroll, N of town of Bastrop	T.D. 2,376 ft.; set csg. to test show oil in Serpentine.
Properties Trading Co.'s No. 1 Henry Freitag, 400 ft. from SE line, 1,800 ft. from NE line of F. Conley Sur.	T.D. 1,450 ft.; drlg.
R. R. Ogden's No. 1 Riddle, 350 ft. from E line, 750 ft. from N line of 94.5-ac. tract in Joshua Gray Sur.	Rigging up.
BEE COUNTY	
Fitzgerald & Pryer's No. 1 Albert Johnson in M. Alcarte Sur.	Rigged up and S.D.
Howeth & O'Neal's No. 1 King ranch, 660 ft. from N and W lines of Kleberg 140-acre tract in Robert Stevenson Sur.	T.D. 3,953 ft.; drlg.
C. F. Nichols' No. 1 Kimball, 225 ft. N, 40 deg. W of Grayburg Oil Co.'s No. 1 Kimball	T.D. 3,550 ft.; fishing.
Nichols & Bruner's No. 1 Grover Heldenfels in John Bryan Sur., 891 ft. from S line, 1,950 ft. from E line of tract	Rigging up.
J. Stanley Smith's No. 1 Weiss, 3,096 ft. E of E line of Sec. 1, Ragsley Subd., and 390 ft. from N line of Uranga grant	Rigging up.
BELL COUNTY	
Alex Krauss' No. 1 W. P. Edds, 650 ft. from S line, 150 ft. from W line of 100-acre tract in M. Moreno Sur.	T.D. 500 ft.; S.D.
BEXAR COUNTY	
Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio	T.D. 1,040 ft.; set 4½-in. csg.
S. W. Blount's No. 1-A S. A. Land & Dev. Co., 10 ft. from No. 1 in I. Perez Sur.	T.D. 900 ft.; no report.
Eckert et al's No. 1 Edwards, 150 ft. to N and W lines of farm in Martines Sur.	T.D. 1,930 ft.; standing.
Robert C. Hill's No. 1 Schell, 1,300 ft. from N line, 1,100 ft. from W line of 161-ac. tract in Sec. 234, Perretaux Sur.	Location.
Linda Oil Co.'s No. 1 John and R. S. Watson, 600 ft. from S line, 150 ft. from E line of 200.7-ac. tract in Cruise Landin Sur.	Location.
Moore-Jauer's No. 1 Holly R. Ellison, 2,916 ft. from E line, 1,800 ft. from S line of farm in T. York Sur.	T.D. 1,953 ft.; standing.

(Continued on Page 64)

Gypsy Gets Good Well in Outside Hobbs Test; Likely Wildcats in Montana and Wyoming

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Aug. 29.—One new well is being started in the Hobbs townsite by the Midwest Refining Co. The Gypsy Oil Co.'s No. 2 Graham, an outside well, was given a potential of 3,888 bbls. per day after being drilled deeper. One new operation spudded in San Juan County. In Colorado, there were no new developments in the Weld-Morgan Counties wildcats.

Cheyenne County and Logan County are to be tested in two wells being started. One new location was announced in Yuma County and The Texas Company is completing a producer in Tow Creek.

In Wyoming, Julius Peters' Weston County wildcat is preparing to drill in. Two locations were made in Osage. One well was abandoned in Lance Creek and a small oil well is being completed on the Hidden Dome in Washakie County. The Shawnee structure in Converse County may be tested shortly, following the reopening of the public domain for prospecting. The Mutual Syndicate's Midway Dome test is about on top of the Muddy sand after cutting a highly saturated stray. The Texas Company had a small completion in Sublet County.

In Montana the Ohio Oil Co. appears to have a producer on the Dry Creek Dome in its No. 7 Robinson and The Texas Company will make a deep test of the Cut Bank Field after cutting three gas sands. One completion and one location were reported in the Kevin-Sunburst Field.

South Dakota reports a new operation and three wells drilling.

NEW MEXICO

Lea County

The Gypsy Oil Co.'s No. 2 Graham, NE cor. Section 24-18-37, an outside well in the northern part of the field, which gauged at the rate of 4,666 bbls. daily at a total depth of 4,190 feet, failed to show any improvement upon being deepened. It was drilled to 4,217 feet and the 8-inch tubing was run to 4,200 feet. It gauged open 3,888 bbls. of oil and 5,750,000 feet of gas per day, and through the tubing 3,188 bbls. of oil and 4,000,000 feet of gas. The pay was found at 4,042-4,217 feet.

The Empire Gas & Fuel Co.'s No. 4 Hardin, NW cor. Section 19-18-38, is drilling at 3,620 feet in anhydrite, and the Shell Petroleum Corp.'s No. 1 Rice, SE cor. Section 13-18-37, cemented the 9⅝-inch at 2,778 feet with 400 sacks.

In the southeastern part of the field, the Midwest Refining Co. has made a location for its No. 11 Byers, C NE NW Section 3-19-38, in the Hobbs Townsite, an outside location offsetting a producer on the west. The Midwest's No. 11 Terry, C NE SE Section 9-19-38, is bottomed at 4,033 feet and cemented the 8⅝-inch at 4,031 feet with 150 sacks. The Skelly Oil Co.'s No. 1 Turner, SE NW Section 34-18-38, cemented the 9⅝-inch on bottom at 2,778 feet with 400 sacks.

In the Eunice area, the Tidal Oil Co.'s No. 1 State, C SW NE Section 8-21-36, is bottomed at 3,820 feet and reaming to bottom. It cored from 3,740 to 3,820 feet.

In the Lea area, The Texas Company's No. 3-A State, Lot 2, Section 2-21-33, is drilling at 3,040 feet in salt.

Chaves County

R. D. Compton's No. 1 Emerson, SW SW SE Section 20-10s-24, near Roswell, is bottomed at 700 feet and preparing to run the 8¼-inch to dry up the hole.

Eddy County

R. Spearow and others' No. 1 McClelland, SW NW NE Section 22-22-23, 25 miles west of Carlsbad, is spudding with cable tools.

W. A. Scott's No. 1 Kaiser, NW SE Section 7-18-27, southwest of the Artesia Pool, which had a small show of oil in the Compton-Brainard sand topped at 1,038 feet, is drilling at 1,100 feet in white lime.

Flynn, Welch & Yates' No. 63 State, Artesia district, is bottomed at 1,062 feet in anhydrite and shale and is fishing for tools. It cut the salt at 426-555 feet.

Leonard & Levers' No. 2 State, C SE Section 21-17-28 (corrected location), spudded August 13 and is drilling at 230 feet in red rock.

De Baca County

The Landowners Oil Co.'s No. 1 McAdoo (State) SW cor. NE Section 16-1s-27, Buffalo Creek, is drilling at 5,060 feet in lime and shells.

Bernalillo County

The Norrins Realty Co., Inc.'s No. 1 Pajarito grant, NW cor. NE Section 22-9n-1e, is drilling at 2,781 feet in river wash.

Santa Fe County

The New Mexico Securities Co.'s No. 1 State, NE cor. SW Section 6-10n-7e, Barton district, is drilling below 400 feet. The Kelsey Clients Development Estate's No. 1, Section 26-10n-10e, Crow Butte district, is drilling at 350 feet.

San Miguel County

The Hersfield Oil Development Co.'s No. 1 Cabra Springs Ranch, C NE Section 21-12-22, is drilling below 2,600 feet after sidetracking and cementing off string of tools. This company is preparing to drill another test on the North Dome of the Pinon Mesa structure.

San Juan County

The Southern Union Gas Co. has received 28 cars of pipe at Aztec to be used in constructing its gas line connection from the Ute Pasture gas wells to the Farmington-Albuquerque line near Farmington. The line is now being surveyed.

R. C. Oswell's No. 3, NE Section 33-

(Continued on Next Page)

Results in Red Coulee Field, Alberta, Indicate Possibility of a Kevin-Sunburst Extension

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Aug. 27.—In the Alberta portion of the international Red Coulee Field, D. A. McDonald Syndicate's No. 2 Kotop, Section 2-1-17w4, is reported to have got the first gas sand at 1,435 feet. Drilling is being continued below 1,650 feet for oil. No. 2 Kotop is the only active test at present on the Alberta end of the structure; it is just north of the Askalta producers in Montana and a little west of the Vanalta producers. The Alberta end of the Red Coulee Field, with five producing wells, is making a little better than 100 bbls. a day, production being piped to the refineries at Coutts.

Askalta Producers

On the Montana side, Askalta Oils' No. 6 Farbo, SW NE, Section 2-37-4w, after a variety of tests, in one of which the well delivered 60 bbls. of crude in five minutes, has been put on the pump and is reported showing a settled production of about 400 bbls. a day from the Vanalta sand. There are reported to be some indications of water, though the earlier flush production was all clear oil; and production is being held down to combat any possible water condition. The Askalta group of wells is reported delivering about 1,400 bbls. a day.

The results secured in this test indicate the possibility of extending production along the Kevin-Sunburst "nose" on which the Red Coulee Field is located; and further new drilling in this area is looked for.

Keho Lake Test

In the Keho Lake district, southern Alberta, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, is reported drilling out a new setting of cement, in connection with its sidetracking job around 4,870 feet. The test is being carried down to determine productivity of an oil sand in the top of the Madison lime at 4,920 feet, where last fall the earlier drilling got a good show of 34 Be. crude. Continental Oil Co. of Delaware is associated with Hudson's Bay Oil & Gas Co. in the test.

On the Montana side of the boundary, Milk River Petroleum Co.'s rotary test on the Milk River anticline in the NE NE, Section 28-36-12w, is making new hole below 3,780 feet, and approximately 600 feet or more in the Kootenay formation. The test encountered coal seam markers at 3,556 feet and 3,590 feet. The test of Myers & Johnson of Calgary on the high point of the Kevin-Sunburst structure in Section 19-34-1w is shut down at 600 feet.

North Turner Valley

In the North Turner Valley, Model Oils' No. 2, LSD 16, Section 22-20-3w5, has a further fishing job around 3,952 feet, additional tools having been dropped while fishing for the first string.

Central Turner Valley

In the Central Turner Valley, McLeod Oil Co.'s No. 4 deep test, LSD 16, Section 1-20-3w5, is reported drilling below 7,090 feet. New McDougall-Segur Oil Co.'s No. 5, LSD 14, Section 12-20-3w5, is drilling around 2,000 feet.

South Turner Valley

In the South Turner Valley area, Hylo Oils' No. 1, LSD 12, Section 4-19-2w5, is making repairs and taking crude naphtha production. As soon as repairs are completed, light crude production from the Home sand will be resumed.

In the far south, Mar-Jon-Freehold's No. 1, LSD 9, Section 28-18-2w5, rotary test, is drilling below 4,803 feet and making hole slowly in hard formation.

Tests in the Foothills

On the Moose Mountain structure north and west of Turner Valley, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is drilling below 3,490 feet and making good headway toward the Home sand, which is looked for around 3,600 feet.

On the Fisher Creek structure, Cotton Belt Mines' No. 1, LSD 5, Section 21-21-4w5, is shut down at 3,142 feet. The test has been making good headway since resuming a few weeks ago, but some further indications of faulting are reported.

Oil City Test

In the old Oil City Field near Waterton Lakes, Oil City Royalties' No. 1 Patrick, Section 30-1-30w4, is expected to start drilling early in September. Location is in an area of oil seepages and within 10 yards of the old Lineham well, drilled by the Rocky Mountain Development Co. some 30 years ago. The Lineham well got a fair production of high grade crude, but operations were discontinued owing to marketing difficulties.

Pincher Creek Test

Location of the Oil City Royalties' No. 1 is not far from Weymarn Petroleums' No. 2, in the Pincher Creek district. Weymarn's No. 2, in LSD 5, Section 7-6-1w5, has been standing for some months at around 3,980 feet. The test was part of a comprehensive development program covering various Alberta areas, and launched some years ago by Peter and Paul von Weymarn of Oslo, Norway.

Conservation Case

The hearing of the appeal in the case of Spooner Oils, Ltd., against the Turner Valley Gas Conservation Board will take place before the appellate division of the Supreme Court of Alberta at Calgary, the session opening on October 3. The Spooner company is seeking to have the legislation providing for Turner Valley gas conservation declared ultra vires. The suit instituted by the company was dismissed by the trial court, but it is understood that the litigation will be carried to the highest court for a thorough test of the validity of the legislation in question.

Kinsella Gas Test

In the Kinsella Field, East Central Alberta, Northwestern Utilities' No. 2 Harvey is drilling below 800 feet, after

setting casing for water shut off at 700 feet.

Wainwright Field

Sasko-Wainwright Oil & Gas Co., operating in the Wainwright Field, East Central Alberta, held its annual meeting at Saskatoon, recently. Officers elected were: President, J. C. McLeod, Wainwright; vice president, C. H. Spencer, Saskatoon; secretary-treasurer, J. G. Morton, Wainwright. It was decided to move the head office from Saskatoon, Saskatchewan, to Wainwright, Alberta.

Manitoba Gas Test

In the Manitou district, southwestern Manitoba, Commonwealth Petroleums' No. 2, LSD 2, Section 26-2-9-wPM, is reported drilling below 2,100 feet in a test for gas.

British Columbia Operations

In the Sage Creek district, southeastern British Columbia, Crow's Nest-Glacier Oil Co.'s No. 1, is at 3,260 feet and held up by drilling troubles. The 3-inch tubing is reported to have parted at 2,400 feet, jamming the drill rods. At last reports some 2,980 feet of rods had been recovered and tubing was being pulled. The last drilling was in a very much shattered formation, apparently resulting from the shot in the original hole which bottomed at 3,260 feet. Gas flow has increased considerably and the driller were about to swab the well when the break occurred.

Shareholders of the Okanagan Oil & Gas Co. held their annual meeting recently at Kelowna, British Columbia, when the following officers were elected: President, E. G. McKenzie; secretary-treasurer, R. H. McKenzie; directors, H. W. Spencer, J. W. Chard and P. S. Graham. Okanagan's No. 1, in Section 2-26-Osoyoos Survey, is bailing after cementing for water shut off. As soon as the well is clear of water, tests will be made of potential oil and gas production. It is reported that a number of Turner Valley companies are preparing to enter the Kelowna area if the tests of Okanagan's No. 1 show favorable results.

Rocky Mountain Area

(Continued from Preceding Page)

30n-11w, 4 miles southeast of Aztec, is drilling at 280 feet with sands in the Farmington as the objective. The location is 440 feet west of No. 2, which was completed at 1,465 feet last year and is now pumping 12 bbls. per day. A small topping plant is being installed. No. 3 is reported running higher than No. 2.

The Continental Oil Co.'s No. 30, SW NE SW Section 12-29-19, Rattlesnake Dome, is drilling at 880 feet in dark shale. Its No. 24, the second deep test, SW NW SW Section 1-29-19, is bottomed at 7,370 feet and fishing for tubing. Its No. 17, C NE Section 2-29-19, total depth, 6,985 feet, is swagging casing at 3,277 feet.

Rio Arriba County

The Pan States Oil Co., Ltd., which recently announced that it would drill a 6,000-foot Pennsylvanian test on the Elvado structure, has released location in Section 26-3s-1e. Materials started moving in several weeks ago, but work was delayed by the necessity of blasting out foundations on the bank of the Chama River. J. A. Bennett, who had the contract, was killed recently when his horse pushed him over a 25-foot embankment into Lake Elvado.

Valencia County

The Western Natural Resources Corp., Inc.'s No. 1 De Chaves, C NW NE Section 8-6n-1e, 12 miles southwest of Las Lunas, is drilling below 1,000 feet. Homer C. Mills, Inc.'s No. 1 Tome Grant, C NW SW Section 29-6n-3e, is rigging up.

COLORADO

Weld-Morgan Counties

There were practically no new developments in the northeastern Colorado wildcats this week. The Ohio Oil Co.'s No. 1 Butters, C SW SW Section 7-6n-60, northeast of the Greasewood producers, which had 2,600 feet of oil standing in the hole 10 days ago at a total depth of 6,715 feet when the rotary rig was pulled, is installing cable tools to clean out, run tubing and make a test. Manning & Terry's No. 1 Niles, C SE NE Section 13-6n-61, is shut down at 6,721 feet with water in the hole, supposedly from the Dakota, waiting for the completion of the No. 1 Butters. The Tulsa-Fort Morgan Petroleum Corp.'s No. 1 Anthes, C NE NE Section 24-8n-59, New Raymer district, is shut down at 3,318 feet to install rotary.

The Ramsey Petroleum Co.'s No. 1 St. Anthony, SW NE SE Section 15-7n-59, New Raymer district, has derrick up, boilers and pumps set, and is building a 5-mile 6-inch water line from a sump in Wildcat Creek. This location is on the Tighe ranch, but the well has been named No. 1 St. Anthony for a charity organization which has been given an interest in the test.

The Retter Oil Co.'s No. 1 Cronin, NW cor. SW Section 24-1n-66, Fort Lupton district, is drilling at 625 feet.

Cheyenne County

Some kind of a test is planned in the Mount Pearl district, north of the town of Kit Carson, by the Mount Pearl Oil Co., represented by C. W. Melton, of Denver. Carver and Melton recently advised the Kit Carson Chamber of Commerce that they had signed a contract to drill and that three or more families would live in Kit Carson and the drillers at the well.

Elbert County

J. M. Botts and others' No. 1 Union Pacific-Richardson, C NW SE Section 7-8s-58, Buick district, is reported drilling around 1,500 feet. No information is being given out by the operators. Last week it was reported much deeper, but a scout checking the drill stem put it at the depth named.

Logan County

A small machine has been set up in the SW Section 14-9n-55, West Plains district, and several joints of 15½-inch pipe are on the ground. A slush pit is being dug. A lease from Ernest R. Rathman, upon whose ranch the outfit is located, was recorded, giving a lease on 480 acres to E. C. Stockdick, of Sidney, Neb. It provides that the lease shall be surrendered unless a well is started within a radius of 10 miles of the West Plains postoffice on or before September 1. Appartntly a validating hole is being started sufficiently large to install a heavier rig capable of going to deep objective.

Routt County

The Texas Company's No. 4 Carstarphen-Irwin, NE NW NW Section 5-6n-86, Tow Creek, is bottomed at 3,860 feet and running tubing and rods. It has been swabbing oil from the shale for the past several hundred feet.

Rio Blanco County

The Magnolia Petroleum Co.'s No. 1 Titley, NW cor. SW Section 15-2s-96, Piceance Creek, is drilling at 1,220 feet in brown shale. It has just gone through a streak of gilsonite.

Larimer County

Charles A. Culter's No. 1, SE Section 4-4n-70, West Berthoud, is drilling at 850 feet in shale.

Yuma County

Ira L. Keith and others are rigging up for No. 1, Section 20-2s-43, Blackwolf structure, and expected to spud within the next two days. Location is in the vicinity of the old Midfield Oil Co. gas wells which Keithe and his associates purchased recently. These wells have been cleaned out and put into condition to produce. Upon completion of the new well, it is planned to begin construction of a pipe line to Yuma, Wray and Eckley, where 25-year franchises for natural gas have been granted.

WYOMING

Weston County

Julius Peters and others' No. 1 Witzell, SE cor. NW Section 30-46-64, Fiddler Creek, to the southwest of the Osage Field, which last week was reported showing oil and which gives promise of opening some good drilling territory, is bottomed at 4,507 feet in a broken sandy formation just below a hard caprock and is running a string of 6⅝-inch pipe to 4,505 feet. This formation is considered a marker, indicating that the hole is bottomed about 10 feet above the Muddy sand. However, there is a difference of opinion as to whether the hole is on top of the Muddy or the Frontier. Several hundred feet of oil was reported standing in the hole. C. A. Harper, Frank P. Book, of the Book-Cadillac Hotel, Detroit, and H. L. Wadsworth, a Detroit banker, were at the well with Mr. Peters when the oil made its appearance. Last week in describing the structure there was an error, caused by the omission of a comma, which gave a wrong impression. The reverse dips which indicated a closure on the northeast, were incorrectly described. The geology, as reported by Petroleum Information, Inc., is as follows: "The regional dip is to the southwest and averages between 2 and 5 degrees. North of the location is a prominent knoll which stands above the general valley of Fiddler Creek. The knoll is an erosion remnant formed by thin and massive sandstones of the Fox Hills formation. Reverse dips between 8 and 12 degrees, north 70 degrees east, were recorded in the sandstones of this knoll. Closure to the south was established by the digging of pits where dips of from 3 to 5 degrees were recorded on bedding planes between the shales and sands of the Fox Hills formation."

There were no completions reported in the Osage Field this week. Routine drilling operations included the following:

The Riggs Oil Co.'s No. 2, SE NE Section 16-46-64, is drilling at 2,400 feet, and the General Oil Co.'s No. 1, SW cor. NW Section 15-46-64, is waiting for cement to set. The Tug Oil Co.'s No. 2, NE NW SW Section 15-46-64, is drilling at 950 feet, and the Central West Oil Co.'s No. 1, NE cor. SW Section 15-46-64, is drilling at 1,700 feet. The Wyoming-Dakota Oil Co.'s No. 1, SE SW NE Section 15-46-64, is drilling at 1,800 feet, and the Chadron-Osage Oil Co.'s No. 2 Thierry, CNL NW NE Section 31-46-63, is ready to spud. The Homestake-Osage Oil Co.'s No. 3, CSL SE NE Section 15-46-64, is an abandoned location. This company's operation is somewhat confused with that of the West Osage Oil Co. on account of similarity of names. In order to avoid confusion, the name of the last company has been changed to the Homestake-Osage Oil Co., both being under the same management. The Homestake-Osage Oil Co.'s No. 4, NE cor. SW Section 13-46-64, formerly carried under the name of West Osage, is drilling at 1,300 feet. The Yellowstone Oil Co.'s No. 3, SE NE NW Section 23-46-64, is drilling at 1,800 feet.

Two new operations were reported as follows: Sandell and others' No. 2, CSL SE SW Section 12-46-64, is rigging up, and the Chadron-Osage Oil Co.'s No. 1, CNL NE NE Section 13-46-64, has rig on location.

Crook County

McWethy an dothers' No. 1, Section 1-49-66, Wind River district, 7 miles northwest of Thornton, which was reported three weeks ago to have shut down at 530 feet in the top of the Muddy with a show of oil and gas, is resuming. This operation is something of a community proposition and it is reported that the well was shut down so several of the farmers could go home to harvest their wheat. Walter Tracy is identified with the operation. The hole will be underreamed and pipe set before the sand is tested.

Niobrara County

The Indian Petroleum Co.'s No. 1, NE NW NE Section 7-35-65, west end of Lance Creek, which was reported last December to be showing a little gas with water in the top of the Sundance at 4,229 feet, after which it was shut down for orders, has been abandoned.

The Ohio Oil Co.'s No. 2 Richards & Comstock, C NE SW Section 32-36-65, cemented the 12½-inch at 240 feet and is waiting. This hole is to be carried to the Sundance and is being drilled with rotary.

Converse County

The Shawnee structure in Converse County, northeast of Douglas, probably will have a test at an early date. Two years ago the Northern Oil Co., in which Robert G. Taylor is interested, assembled a large block of acreage. Part of the leases were turned to the Phillips Petroleum Co., which concern drilled a number of core holes to verify surface and magnetometer work it previously had done. One of the core holes in the NE Section 27-32-69, had 1,000,000 feet of gas at 360 feet, and some of the others are reported to have had oil and gas shows. Interests other than the Phillips company had secured some acreage and there was some government land not open to prospecting. These made holes in the block which discouraged the drilling of a deep test. It is understood now that following the reopening of the public domain the government acreage was filed upon and that block has been leased solid. The plan reported is to organize a new company to take over and test the block, with several of the major companies participating.

The Continental Oil Co.'s No. 30 Glenrock Sheep, SW SE SE Section 4-33-76, Big Muddy, which found only good shows of oil and gas in the Lakota at a total depth of 4,386 feet, has resumed and will be carried down to the Sundance, which has never been tested in the Big Muddy. It is drilling at 4,413 feet in green and gray shale.

The Ohio Oil Co.'s No. 25 Kinney, SE SW SE Section 4-33-76, has plugged hole back to 3,550 feet to straighten and is waiting for cement to set.

Natrona County

The Mutual Oil Syndicate's No. 2, C SW SE Section 14-35-79, Midway Dome, is drilling and coring at 6,020 feet with the top of the Muddy expected at 6,053 feet. Last week it was reported that when a core was taken at 5,926 feet it came out dripping oil and it was thought either the Muddy had been found higher than expected or that a stray sand had been encountered. Additional coring proved it to be a stray sand in the Mowry shale. This sand was found bttween 5,826 and 5,933 feet and appears to be heavily saturated. It is planned to produce this sand after the Muddy is tested. In No. 1, to the southeast, the stray sand was found 41 feet deeper and the Muddy made several flows before it was shut off to test lower horizons.

The Summitt Oil Co.'s No. 1 Trewitt, NW cor. Section 21-33-80, North Platte, is drilling below 1,600 feet. The hole was dried up with the 8¼-inch at 1,387 feet.

The Lakota Oil & Gas Co.'s No. 7 Young, SW NW SE Section 1-36-82, North Casper Creek, is drilling below 400 feet.

Washakie County

Bales Oil Trust's No. 1 Brome, NE NW Section 31-48-80, on the Hidden Dome, a short distance north of one of the Ohio Oil Co. gas wells, appears to be a small producer in the first Frontier at 1,430 feet. The 6¼-inch was landed on top of the sand and when drilled into, the oil rose in the hole, but did not flow. It probably will make 25 to 50 bbls. of high gravity crude. It will not be drilled down to the second sand at this time. The Ohio Oil Co. has four gas wells on the structure and the gas is piped to Greybull and Basin.

Park County

Julius Peters, president of the Resolute Oil Co., which drilled in the Badger Basin discovery well, the deepest well drilled in Wyoming, is quoted by the Inland Oil Index as saying that the well is averaging around 56 bbls. per day steadily from a total depth of 8,725 feet. The oil is refined in a skimming plant on the lease and the products are sold locally at more than $4 per barrel net. It is the intentions of the company to drill another well as soon as conditions warrant. The Bad-

ger Basin well has been on production for a year.

The Henderson Producing Co.'s No. 10, SW NE NE Section 31-58-99, South Elk Basin, is drilling at 615 feet.

Fremont County

The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, Alkali Butte, is coring at 2,803 feet. The Ward Oil & Gas Co.'s No. 2, NE cor. Section 28-34-90, Dutton Basin, set the 8⅝-inch at 3,600 feet and is drilling at 3,612 feet in hard conglomerate.

Sweetwater County

The Wyoming-California Petroleum Co.'s No. 1, SE SE Section 23-17-104, Middle Baxter Basin, is drilling at 4,017 feet and continues to show some gas.

Sublet County

The California Petroleum Corp.'s No. 7-H-2, Lot 10, Section 3-26-113, La Barge Field, was completed at 962 feet for 15 bbls. per day initial on the pump.

Clarence Cook, of Evanston, has been appointed special master by a Salt Lake City court to take evidence in a suit brought by Thomas B. Jefferson against the Piney-La Barge Oil Co., in which it is reported he is seeking to recover $4,000 for labor, wages, etc. Jefferson was in charge of drilling a test for the company in Section 12-28-113, Dry Piney, known as the "Jap" well. More than a year ago it was reported bottomed at 2,290 feet and fishing for bailer.

UTAH

The Utah Southern Oil Co.'s No. 1 Balsey, C NE NE Section 31-23-21, Grand County, is drilling at 5,956 feet in salt.

WASHINGTON

The Ohio Oil Co.'s No. 1-A Robinson, Section 5-17n-9w, Gray's Harbor County, is drilling at 3,136 feet in shale.

MONTANA

Carbon County

The Ohio Oil Co.'s No. 7 William Robinson, C SE SE Section 3-7s-21, Dry Creek Dome, an offset to No. 1 Chapman, is bottomed at 5,729 feet and is testing the Lakota sand which is showing considerable oil and gas and looks as if it will be a producer. Same company's No. 1 Bowman, C SE NE Section 4-7s-21, is drilling at 4,767 feet in shale, and its No. 9 Souders, C NE SW Section 2-7s-21, is rigged and ready to spud. Its No. 8 Caldwell, SE SW NE Section 12-7s-21, cemented the 8⅝-inch at 4,349 feet on top of the second Frontier and is preparing to test after plugging back from 6,887 feet.

Glacier County

The Texas Company's No. 1 Peterson, SW NE SE Section 22-36-5w, Cut Bank Field, is drilling at 2,940 feet after going through three sands showing considerable gas. The gas was killed to go deeper and it is now below horizons heretofore tested in this field. The location is one-quarter mile east of the Montana Power Co.'s No. 1 Cummings, a gas well.

The Milk River Petroleum Co.'s No. 1 Blackfeet, SW NE NE Section 28-36-12w, Milk River district, is drilling at 3,910 feet.

R. C. Tarrant's No. 1 Reickhoff, SE SW NE Section 3-34-6w, Cut Bank district, is drilling below 600 feet after recementing surface pipe.

Toole County

In the Kevin-Sunburst Field, Pfabe & Engleking's No. 3 Seabrook, C SE SE Section 19-35-2w, was completed at 1,500 feet and is estimated at 15 bbls. settled. It made 40 bbls. initial. The Imperial Natural Gas Co.'s No. 2 Danielson, SW cor. NW Section 21-35-1w, is shut down at 600 feet to finance. Myers & Johnson's No. 1, Section 19-34-1w, is drilling at 1,200 feet. It had some gas in the Sunburst and the Ellis is expected at 1,350 feet. B. F. Reed has let contract to Pfabe & Engleking for No. 1 Van Note, NW cor. Section 30-35-2w, and is moving in.

In the Border Field, the Askalta Oil Co.'s No. 6 Farbo, NE SW NE Section 2-37-4w, is now making around 400 bbls. per day and same firm's No. 7 Farbo, SE NW NE Section 2-37-4w, is spudding.

Hill County

The Fargo Oil & Gas Co.'s No. 1 Morris, C SW NW Section 20-37-15, Signal Butte district, is drilling below 550 feet.

SOUTH DAKOTA

Fall River County

The Chadron-Osage Oil Co.'s No. 1 Moody ranch, NE cor. SW Section 6-12s-6e, is drilling at 3,200 feet after repairing derrick which was pulled in while running pipe. The Lakota Development Co.'s No. 1 Knude, SE SE Section 20-10s-4e, Shiloh district, has resumed at 2,820 feet after being idle for the past year. Dan J. Killen and others' No. 2, Section 17-8s-3e, Red Canon district, is preparing to drill a second test under an operating agreement with Hollingsworth & Neuquette. No. 1, NE SW Section 17, lost the hole just before operations were suspended in 1930. It was bottomed at 2,085 feet and had a show of oil with water. The oil was believed to be coming from the Amsden formation. Rockford, Ill., interests are reported behind the operation, being the same people drilling the Barker Dome in Custer County.

Custer County

The Barker Structure Drilling Co.'s No. 3 Adams, NE cor. SW Section 34-6s-2e, Barker Dome, is resuming at 1,617 feet. At 1,525 feet it had water with a show of oil.

Butte County

The Wytex Oil & Gas Co.'s No. 2 Hamilton, SE NE Section 38-8n-1e, Oak Creek, is drilling at 1,300 feet. It topped the Minnelusa at 1,125 feet. Formations cut include 159 feet of the Sundance, 820 feet of red beds, 38 feet of Minnekahta lime and 108 feet of the Opeche.

Government Lets Numerous Small Contracts Past Week

NEW YORK, Aug. 29.—Atlantic Refining Co. has been awarded a contract for 500,000 gallons of fuel oil, at 4¼ cents per gallon, for delivery to the U. S. Engineer at Philadelphia, Pa.

Other government orders for refined products reported awarded during the week were as follows:

Cooper-Keller Oil Co., Houston, Tex., 8,000 gallons of bunker "A" fuel oil, at 4⅝ cents per gallon, for delivery to Army Quartermaster at Fort Sam Houston, Tex.

Phillips Petroleum Co., 8,000 gallons of gasoline, at $416, less 1 per cent, for delivery to U. S. Engineer at Rock Island, Ill.

Paramount Petroleum Co., Kansas City, Mo., 15,000 bbls. of fuel oil, at 5.208 cents per gallon, less 1 per cent, for delivery to the U. S. Engineer at St. Louis, Mo.

Petroleum Oil Corp., 1,000,000 gallons of fuel oil, at 1.01 cents per gallon, f.o.b. Blackwell, Okla., less 1 per cent, for delivery to the U. S. Engineer at Kansas City, Mo.

Atlantic Refining Co., 75,000 gallons of fuel oil at $2,677.50 for delivery to the U. S. Engineer at Savannah, Ga.

Humble Oil & Refining Co., for delivery to Fort Sam Houston, Tex., 1,500 gallons of kerosene at 9 cents per gallon.

Standard Oil Co. of Indiana, for delivery to Fort Sam Houston, Tex., 1,400 gallons of kerosene at 12½ cents per gallon and 1,000 gallons of fuel oil at 10 cents per gallon.

Rio Grande Oil Co., for delivery to Fort Sam Houston, Tex., 600,000 gallons of bunker "C" oil at 2¼ cents per gallon; 125,200 gallons of bunker "C" oil at 4¼ cents; and 2,500 gallons of fuel oil at 9 cents.

The Bureau of Supplies and Accounts, Navy Department, Washington, D. C., will open bids September 23 for aviation gasoline for delivery to East Coast stations.

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Siliceous Lime Producer in Kingman County Gets Sulphur Water But Is an Important Find

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

Skelly Oil Co.'s No. 1 Liesman, in Section 20-27-10w, Kingman County wildcat, showed the existence of oil production in the Siliceous lime in that county when the well flowed 45 bbls. of oil the first hour and 25 bbls. an hour for 12 hours. The gas was estimated at 20,000,000 feet a day.

The showing caused a sensation in oil circles early last week, which quieted down somewhat when water began to appear in the hole. It was later reported that this was sulphur water, indicating that it came from below. The Skelly Oil Co. suspended drilling operations on the well and at this writing its future was undetermined. Notwithstanding this setback, the well is regarded as an important one as it has proved the existence of Siliceous lime production on the big Skelly block. The well is bottomed at 4,195 feet, 102 feet in the lime.

It is one of the few Siliceous lime wells in the State that has found a sufficient quantity of gas in the lime to flow the well. It is also believed to be the deepest producing well in the State. It is in the richest looking Siliceous lime yet found in the central western part of Kansas.

The well is 26 miles south of the nearest other Siliceous lime well. It is the third well to find oil on the Skelly Oil Co.'s block. The other two were completed as oil wells in the Kansas City-Lansing formation.

Many express the opinion that this deep well proves the existence of a large regional high and that wells drilled lower down on the structure may be larger and more prolific oil producers from formations that are expected to be found on the edges of this large structure.

The company has been shipping some of the oil produced from the shallow wells to its refinery at Eldorado, in tank cars. But it may decide later to construct a pipe line to this new pool, when market conditions warrant. The production is located about 65 miles west of Wichita and about 50 miles south of the Raymond Pool, in Rice County.

Good Wells in Greenwood

New wells continue to be completed along the trend southeast of Hamilton, in Greenwood County, with a large initial production. A. M. Landon and others' No. 2 Smith, CEL SW NW Section 8-24-12, found the Bartlesville sand at 1,705-31 feet, and it was given a shot and is estimated at 200 bbls. daily. It is the direct offset to the Matthews and Rex's No. 2 Wilson. A. M. Landon's No. 3 Smith, SW cor. SE NW Section 8-24-12, was underreaming casing.

R. Flodeiss and others' No. 1 Barker, SW cor. NW NE Section 16-24-12, has 12 feet of pay sand which some believed to be the Cattlemen's sand. The oil was filling up in the hole and it is estimated at 200 bbls. daily.

H. Gore's No. 3 Brothers, CNL SE NW NW NE Section 35-23-11, in the Seeley Pool, extension area of Greenwood County, is a location.

Matthews & Rex's No. 2 Reser, in Section 7-24-12, Greenwood County, is rated at 200 bbls. a day and is a larger producer than No. 1 on the same property, a short distance to the north. It is being cleaned out, after a shot.

Polhamus and Smith's No. 1 Beauchat, SE cor. NE Section 5-24-12, is estimated at 50 bbls. daily from the Mississippi lime at 1,805-33 feet. It was shot with 5 quarts and was cleaning out.

In the Seeley Pool extension, Ward McGinnis' No. 6 Edwards, NW cor. SE NW NE Section 33-23-11, Greenwood County, was abandoned after finding only a showing of oil from 1,960-64 feet, total depth 1,987 feet. It was given a shot of 80 quarts but it did not increase the oil showing.

Surprise in Woodson

Pure Oil Co.'s No. 14 Winterscheid, NW cor. NE Section 6-24-14, Woodson County, flowed 148 bbls. of oil the first 24 hours and 255 bbls. the second 24 hours. It is believed to be the largest well completed in Woodson County during 1932. It found the oil and gas production in the Bartlesville sand at 1,533-77 feet. The gas was found at 1,539-73 feet and the oil at 1,575-77 feet.

Pipe Line Nominations

The state umpire and agent for the Kansas Public Service Commission advises that on August 23 the pipe line nominations in the Ritz-Canton-Decker Field, in McPherson County, were increased approximately 3,000 bbls. daily over the previous nominations. The White Eagle Oil Co. announced the largest increase, amounting to 2,500 bbls. daily. Other companies announcing increases in nominations were the Dickey Oil Co., from 860 bbls. to 1,100 bbls., and the Stanolind Crude Oil Purchasing Co. from 1,100 bbls. to 1,200 bbls. daily.

The daily allowable production of the pool was also increased. All Viola lime wells, excepting those receiving the minimum allowance, were increased from 7 per cent to 8.8 per cent daily of their potential. The daily allowable production on all chat wells in the pool, excepting those receiving full production or the minimum allowance, was increased from 5 per cent to 7.8 per cent of their daily potential.

A comparison of the present nomination with the previous ones follows:

Company—	Present nomination	Previous nomination
Dickey	1,100	860
Phillips	3,400	3,400
Shell	3,000	3,000
Skelly	700	700
Stanolind	1,100	1,200
Texas-Empire	100	175
White Eagle	6,500	4,000
Total	16,000	13,235

The total potential of the Ritz-Canton-Decker Pool, on August 1, was 148,965 bbls. daily from 154 wells, based 12-hour gauges. The production is from the chat and Viola lime wells. The 62 chat producing wells had a potential of 43,377 bbls. and the 92 Viola lime wells had a potential of 105,588 bbls. daily.

Included in the proposed purchase from Standard Oil Co. of Kansas by the Standard Oil Co. (Indiana) is the pipe line system, which consists of a 6-inch pipe line running from the refinery at Neodesha in Wilson County to Sallyards in Butler County, and from Sallyards to Eldorado. The latter is a 4-inch line.

From Sallyards a gathering line extends to the northeast, where the company has been purchasing approximately 350 bbls. a day, and shipping it through this pipe line to the refinery. All the other oil received at the refinery was delivered by other pipe line systems.

Lease Transactions

Notwithstanding the overproduction and the lack of market outlets in central western Kansas, a number of recent lease transactions indicate continued interest in that part of the State. The Skelly Oil Co. is reported as having leased the SW Section 30-22-15w, Pawnee County, Amerada Petroleum Corp. purchased 280 acres of leases in eastern Reno County, where considerable development is now under way. The leases included were the NE NE Section 16-25-6w, S half NE Section 16-25-6w, W half NE Section 20-25-4w, and N half SE Section 33-25-4w. Gypsy Oil Co. has taken a lease on the S half SW Section 10-26-9w, Reno County. The Texas Company has leased the W half NE Section 11-25-11w. Vickers Petroleum Co. has purchased the NE Section 1-16-18w, and W half Section 6-16-7w, in Ellsworth County.

As a result of the recent discovery of oil and gas in Siliceous lime in Kingman County, the first Siliceous lime well in the central western part of the State to produce large quantities of gas, a seismograph party has been put to work along the Kingman-Reno County line.

Slick, Pryor & Lockhart's No. 1 Breford, SW cor. NW, Section 7-17-10w, Ellsworth County wildcat well, is estimated at the rate of 20 bbls. an hour from the Siliceous lime at 3,395-98 feet. The well is shut down until tanks are erected. It has been making approximately 145 bbls. daily between the 6 and 8-inch casing from the Kansas City lime at 3,140-55 feet.

Swain and others' No. 1 Henthorn, C NW, Section 21-25-24w, Ford County wildcat, was drilled deeper to a total depth of 5,210 feet, where water rose 4,000 feet in the hole. It was swabbed down to approximately 100 feet off bottom and it was reported that no oil or gas was showing.

Gypsy Oil Co.'s No. 1 Stucky, NE cor., Section 33-20-3w, McPherson County, in the north extension to the Voshell Pool, flowed 42 bbls. an hour on a two-hour test from the Simpson sand at 3,448-59 feet. It extends production a quarter of a mile.

Barton County

Doherty and others' No. 1 Roseler, SW cor. N ESection 11-18-11w, was drilling at 500 feet.

Cowley County

Hunt & Croft's No. 1 Burhe, C SE NW Section 13-30-8, an old well drilled deeper, total depth 1,562, is cleaning out. Jones and others' No. 2 Douglass, NE cor. SE SE Section 32-31-5, made 750,000 feet of gas from 613-19 feet.

Chase County

Polhamus and Skelly Oil Co.'s No. 2 Leedy, SW cor. SE SW Section 25-22-9, was spudding.

Elk County

Davidson & Tracy's No. 1 Fear, SE cor. Section 20-29-12, is a machine.

Ellsworth County

Viking Oil Co.'s No. 1 Satran, C NW SW Section 5-14-9w, was spudding. Skelly Oil Co.'s No. 1 Malcher, C SW SW Section 6-17-9w, was dry at 3,295-98 feet and abandoned.

Douglass County

Smith and others' No. 1 Malcher, C SW SW Section 34-15-19, was abandoned at 1,040 feet.

Greenwood County

Sheedy and others' No. 5 Baker, SW cor. NW NW Section 26-23-13, is a rig. Rhoades' No. 4 Braddock, SW cor. SE SW NW Section 23-22-12, made 35 bbls. of oil from 1,697-1,724 feet. Mathews & Rex's No. 2 Reaser, NE cor. SE NE NE Section 7-24-12, made 225 bbls. from 1,714-26 feet. Houston-Oklahoma Oil Co.'s No. 2 Berg, 610 feet west of center, Section 28-23-13, was abandoned at 1,825 feet. Same operators' No. 3 Berg, SW cor. NE NE SW Section 28-23-13, was drilling at 1,000 feet.

Harvey County

Producers & Refiners' Corp.'s No. 1 Martins, NE cor. NW SE Section 19-22-3w, is a rig. Mabee Drilling Co. and others' No. 1 Martins, NE cor. SE Section 19-22-3w, made 875 bbls. from 3,460-76 feet.

McPherson County

McBride, Inc.'s No. 1 Giffin, C NE SW Section 14-19-2w, an old well drilled deeper, total depth 2,922 feet, was cleaning out. Same company's No. 2 Giffin, C SE SW Section 14-19-2w, made 408 bbls. from 2,964-67 feet. Derby Oil Co.'s No. 1 Sellers, SW cor. NW Section 19-19-1w, an old well drilled deeper, total depth 3,533 feet, was cleaning out.

Reno County

Gled Oil Co. and others' No. 1 Frantz, C NW NW Section 2-24-4w, made 125 bbls. from 3,381-3,495 feet.

Rice County

Twin Drilling Co. and others' No. 2 Rice, SE cor. SW NE Section 3-21-6w, was cleaning out at 3,407 feet.

Sedgwick County

Continental Oil Co.'s No. 2 Casey, SE cor. NE Section 16-25-1, made 25 bbls. from 2,625-36 feet.

Saline County

Twins Mounds Oil Co.'s No. 1 Weis, C W half NE NW Section 20-13-4w, was abandoned at 3,525 feet.

Sumner County

Southland and others' No. 1 Rosecrans, SE cor. SW SE Section 17-25-2, was abandoned at 3,507-22 feet.

Woodson County

Theta Oil Co.'s No. 3 Shaffer, NW cor. SW SE SE Section 31-23-14, is a machine. Same company's No. 2 Shaffer, SW cor. NW SW SE Section 31-23-14, made 125 bbls. from 1,550-83 feet. Kilty No. 2 Shaffer, NE cor. SE SE SW Section 31-23-14, was drilling at 1,100 feet.

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location—	Remarks:
Smith et al's No. 1 Wilson, C NW SW Sec. 13-18-14w	Drlg. 275 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE Sec. 16-19-14w	Set liner 3,530-46 ft.; show oil; C.O. 3,604 ft.

BUTLER COUNTY

Cameron-Great Basin Oil Co.'s No. 1 Lardson, C SE NW Sec. 13-28-3	C.O. 2,010 ft.
Ramsey's No. 1 Michael, SW NW NW Sec. 18-27-3	S.D. 1,985 ft.
Colby et al's No. 1 Featherson, C SE Sec. 27-14-18	Machine.

DOUGLASS COUNTY

Pure Oil Co.'s No. 1 Limb, NW SE Sec. 31-14-19	Drlg. 400 ft.

EDWARDS COUNTY

Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE Sec. 30-24-18w	Drlg. 4,310 ft.

ELLSWORTH COUNTY

Gurley Bros. and Barnsdall's No. 1 Union Pacific, NW SW Sec. 7-14-7w	Rig.

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Kentucky Makes Only Good Showing in Central West Field, With Large Shallow Producers

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Aug. 27.—Numerous scattered completions are reported for the week from the different divisions of the Central West Field, but results have not been what the average operator is looking for in the way of oil producers in the old fields of northern Ohio, Indiana and Illinois. Central Ohio is holding up in completions, and Kentucky reports show a number of good shallow sand wells. In the old Lima Field of northwestern Ohio, Seneca County leads in operations, having had four completions during the week in review, of which two were small gas wells and two dry holes. In Section 11, Hopewell Township, Seneca County, the Industrial Oil & Gas Co.'s No. 1 on the H. W. Hunker farm, drilled for gas, was dry at 505 feet. Michael Machelvich drilled a dry hole in a deep test on the Mary Shumaker farm, Section 10, same township, at a total depth of 2,172 feet. The bottom of the Green sand was found at a depth of 2,137 feet and the top of the White lime formation was struck at 2,155 feet. George W. Ackerman and others are shut down at 1,531 feet in a test on the Mary McElhaney farm, Section 15, same township. In Liberty Township, same county, the Sandusky Gas Co. struck a very light gas well in No. 2 on the Rufus M. Martin farm, and is drilling No. 4 same farm. Floy B. Horner's test on the Anthony F. Brickner farm, Section 34, same township, is a light gas well, and No. 2 same farm is drilling. Frank M. Opp, trustee, abandoned Nos. 6 and 10, old wells, on the Jacob Kimmett farm, Section 28, same township. D. R. McCray has abandoned old wells Nos. 1, 2 and 3 John W. Boroff farm, Section 15, Eden Township, same county, and Jones & Coil are drilling in the top of the Trenton lime at 1,292 feet, and due for completion within a short time. This well is in Section 19, Loudon Township, same county. Tiffin Industrial Gas Co. is drilling a test on the John F. Snyder farm, Section 35, Liberty Township, also in Seneca County.

In Sandusky County, Ballville Township, O'Brien and others topped the Trenton lime at 1,405 feet in a test on the C. J. Rice farm, Section 17, and will soon be completed.

In Freedom Township, Wood County, August Bushman and others have abandoned Nos. 2, 3 and 5 Orrin W. Fish farm, Section 21; Nos. 1, 2, 3, 4, 5, 9, 10, 11 and 12 on the August Kemner farm, same section, and Nos. 1, 2, 3 and 4 on the Henry Moenter farm, Section 27, same township. All of these were old wells.

McPheron and others are drilling No. 5 on the Bowman-Brillhart farm, Section 21, Tymochtee Township, Wyandot County. Harpseter and others are shut down at 1,350 feet in a test on the L. G. Beis farm, Section 11, Crawford Township, same county.

No report has been made of the drilling well by the Eilerman Oil Co. in a test on the Joseph H. Hurd farm, Section 25, Cynthian Township, Shelby County.

Central Ohio Field

Central Ohio reports show 10 completions, four of which were oil wells with an initial production of 66 bbls., four were gas wells and two dry holes.

In Lorain County the Ohio Fuel Gas Co.'s No. 1-566 Paul H. Bassett farm, Lot 74, Eaton Township, is reported a dry hole. McMillen and others have a rig in for a test on the Niels Poulson farm, Section 15, Carlisle Township. C. J. Minor is shut down at a depth of 2,305 feet in a test on the George Myers farm, Lot 41, Ridgeville Township, same county. McMillan and others are drilling close around 2,000 feet in a test on the Henry Schildt farm, Lot 15, Carlisle Township.

In Medina County, Chatham Township, the Oko Oil & Gas Co.'s No. 36 on the Sandford-Watson farm, Lot 10, is reported a 5-bbl. pumper at a depth of 363 feet.

In Holmes County, the Paint Valley Oil & Gas Co., is drilling a test on the Ralph Clinage farm, Section 20, Monroe Township, and the only new well under way in this county.

In Ashland County, Moore and others are drilling No. 5 on the George W. Black farm, Section 34, Mohican Township, Eddy and others are still shut down at their No. 4 on the Edward Gardner farm, Section 17, Perry Township.

In Summit County, Arthur Reeves' test on the N. Kandle farm, Section 36, Green Township, is a gas well in the Clinton lime from 4,354 to 4,375 feet. Barnhart and others have a gas well in No. 1 on the James Kirby farm, Section 3, Richfield Township, in the Clinton from 3,445 3,450 feet. Same firm is spudding in at a test on the Hillside Country Club property, Section 4, same township.

In Licking County, the Emerald Petroleum Co.'s No. 2 on the Sarah Little farm, Section 8, Fallsburg Township, is reported with an initial of 30 bbls. from 2,914 to 2,926 feet. Settles Oil Co.'s second test on the John A. Hughes farm, Section 2, Mary Ann Township, reported good for only 1 bbl. initial in the Berea sand from 567 to 579 feet.

In Muskingum County, the Wittmer Co.'s second test on the Carl N. Riley farm, Section 11, Perry Township, produced an initial of 30 bbls. from the Niagara lime formation at 3,021 feet.

In Athens County, Berne Township, Carpenter & Glazier drilled a dry hole in No. 16 on the N. and C. Curtis farm, in Fractional Section 33, at a depth of 170 feet.

In Stark County, Plain Township, White & Bacon drilled a gas well in a test on the C. M. Corbett farm, Section 7, in the Clinton lime from 4,452 to 4,478 feet. East Ohio Gas Co. is drilling

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Ten Completions in Lower Eastern Fields Show Seven Gassers and Three Small Oil Wells

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Aug. 27.—Completions for the past week in the three districts of the lower eastern fields improved somewhat with a total of 10 wells completed and two dry holes. Seven were gas wells and three oil wells with an initial production of 25 bbls.

SOUTHEAST OHIO

One oil well was completed in southeastern Ohio during the past week and that was in Licking County where the Emerald Petroleum Co. and others completed No. 3 on the Mrs. Arlie Cochran farm in Section 10, Fallsbury Township. Contrary to most of the production in this township, it is a shallow sand well making 5 bbls. a day after being shot in the Berea grit at a depth of 768 feet.

In addition to the one successful completion, there were also two dry holes. In Athens County the Townsend Oil & Gas Co. drilled a second test on the C. P. Riley farm, near Hibbardsville, Section 35, Alexander Township, through the Cow Run sand and to a depth of 158 feet. It proved void of production. In Medina County, E. S. Edson & Son Co. drilled No. 4 on the D. M. Geisinger farm, Tract 9, Lot 9, Chatham Township. It went through the Berea grit to 433 feet without striking production.

Drilling in Ohio

In Washington County J. E. Ripley and others have a rig on a location for a test on the A. H. Barlow farm in Aurelius Township. In Lawrence Township, J. O. Herlan and others have a test drilling on the John McKitrick farm in Section 2, and Clyde Campbell is drilling a test on the William B. DePuy farm in Section 16. In Ludlow Township, the Frazeysburg Oil & Gas Co., Inc., is drilling on the John Whitacre farm in Section 4. In Newport Township, O. J. Gabbert has started a well on the Clyde Ackison farm in Section 10.

In Noble County, W. M. Patten and others have a rig standing for No. 11 on the Austin Cunningham farm in Section 14, Olive Township. In Enoch Township, B. E. King is drilling on the L. R. Crum farm, Section 7. In Morgan County, R. C. Whiener has No. 3 drilling on the S. L. and Joseph Finlet farm, Section 3, Union Township, and B. Hazlett and others are again testing the First Cow Run sand in a third well on the Brown, Manly Co. lease.

In Licking County, the Wehrle Co. is drilling on their own property in Hopewell Township, and Lot 3. J. W. Rutledge has No. 4 drilling on the William D. Booth farm, Fallsbury Township, and Section 14. In the same township the Emerald Petroleum Co. has about completed their No. 3 on the Sarah J. Little farm in Section 8.

WEST VIRGINIA

West Virginia made a better showing during the past week with eight wells completed, several of which were fair gas wells. Calhoun County was most active and furnished half of the completions. Some new production was added to the total.

The best well of the week was in Roane County where the Henderson Oil Co. completed a test on the F. L. Ball farm in Curtis district in the Salt sand at a depth of 1,853 feet. It is a gas well rated good for 1,250,000 feet a day along with a production of about 10 bbls. of oil per day. In the same district, the Reedy Oil & Gas Corp. completed No. 4 on the L. M. Riddle farm several months ago as a gas well in the Injun sand. Recently this well has started producing about a barrel of oil a day along with the gas.

In Union district, Pleasants County, L. C. White and others are testing the Squaw sand in their second well on the State Farm lease. It is making a showing of oil and the operators are planning to shoot it in that formation.

In Calhoun County, the Chemical Oil Co. completed a test on the Rebecca Fling farm in Sheridan district at a depth of 2,429 feet in the Berea sand. It is a fair gas well, natural, rated at close to 750,000 feet a day. In Lee district, F. F. McIntosh drilled his No. 3 on the A. Hardman farm deeper and into the Injun sand. The total depth was 2,078 feet and it is a gas well from that sand. In Center district, T. J. and A. H. Jackson drilled their No. 3 on the T. J. Jackson lease deeper to 2,105 feet. The Injun sand proved dry but the Maxon sand is showing for over 300,000 feet a day. In the same district, J. H. Morrow completed his second test on the Rebecca Fling farm in the Berea sand and is a fair gas well estimated at 300,000 feet a day.

In Cabell County, C. C. Wolfe completed his test on the J. F. Weatherington farm in the Berea sand at a depth of 2,956 feet. It is making a showing for a small gas well after shot. In Doddridge County, the first completion there for months, the Travis Oil & Gas Co.'s No. 3 on the Alexander Stutler farm in Grant district was drilled to a depth of 1,911 feet Big Injun sand, and is a fair gasser, showing for close to 400,000 feet a day.

In Monongalia County the Pennsylvania Counties Gas Co. completed its test on the J. L. Jamison farm in Grant district at 3,090 feet and in the Gantz sand. It is a disappointment making but a small volume of gas. In Battelle district, the West Penn Gas Corp. has reached a depth of 3,072 feet in a test on the Wood Kimble farm and is testing the gas.

Drilling in West Virginia

In Cabell County, in addition to his well completed this week, C. C. Wolfe has two other wells drilling. In Guyandotte district, his test on the C. H. Freeman farm has reached 1,200 feet and is at present down for casing. His other well, a No. 4 on the Ben Lomond Land Co. lease, is drilling at 2,937 feet and close to the sand. In the same district, the Midway City Gas Co. is spudding in a second test on the O. C. Morrow farm. The Guyan Valley Gas Co. has its test on the C.&O.R.R. Co. tract shut down at 1,300 feet. Phillip Hager and others have passed the 1,000-foot mark in their test on the State Hospital grounds. In Barboursville district, the Merrits Creek Gas Co. is drilling a second test on the Ohio River Land Co. tract and has passed 2,500 feet. The same company has its

No. 3 on the Hans-Watts Realty Co. lease, same district, drilling at 400 feet. In McComas district, the Empire State Gas Co. is shut down at 1,400 feet in a test on the C. C. McCoy farm.

In Boone County, the Pure Oil Co. is nearing the sand in their No. 258 on the Williams Coal Co. lease in Sherman district with the log over 3,000 feet. The same company has reached 1,217 feet in its No. 58 on the Federal Coal Co. lease in this district. In Scott district, the Cambridge Gas Co. is down for casing at 1,750 feet in its No. 3 on the C. C. Lewis heirs farm. These are the only drilling operations in the county.

In Wetzel County the State Line Oil & Gas Co. is drilling a test on the Emma M. Kirkhart farm in Church district and it is over 1,000 feet deep. In the same district, Null and Moorhead are down 1,400 feet in their No. 4 on the W. G. Snodgrass farm.

In Marion County, Monroe & Laughlin have their second test on the D. V. Liming farm down to 3,430 feet. A second test in Mannington district is the J. J. Allen and others on the James A. Haught heirs farm. A road has been completed to their location. In Wood County, the Crowley & Carr Oil Co. has moved in machine to start a test on the B. F. Mayo farm in Williams district. In Kanawha County the Guthrie Oil & Gas Co. is reaming a test at 2,418 feet on the V. C. Tate farm in Union district.

In Lincoln County, no new drilling has started. The Woodall Gas Co. has made a location for No. 4 on the James R. Walker farm in Union district, besides holding a location for a No. 3 on the James Walker Adkins farm in the same district. In Wirt County, Glen Roberts is drilling at 500 feet in his test on the G. W. Roberts farm in Burning Springs district.

SOUTHWEST PENNSYLVANIA

One fair producer was the only completion in the Southwest Pennsylvania Field during the past week. In McCandless Township, Allegheny County, O. Miller completed his test on the P. J. Shrum farm in the Hundred-Foot sand. It started off at 10 bbls. a day. This operator has a rig standing for a test on the Samuel Noving farm in the district.

Interest is quickened in the new pool near Amity in Amwell Township, Washington County, with the G. L. Walker resting on top of the Fifth sand and which will be drilled in during the next few hours. Production in this second test on the farm will confirm the extent of the streak. The present curtailment is the only restraining factor to an increased number of tests in the section. However, Raymond Orrill and others are building a rig for a second test on the Mary Hazlett farm and the string will be moved over from the Walker farm as soon as completed.

Wildcats Drilling

In Virginia, the Davis Elkins test on the Smith farm in Buchanan County has reached a depth of 5,610 feet and at present the bailer is in the hole and a fishing job in progress. In Wise County, Benedum & Trees have reached 1,710 feet in their test on the I. Kaufman farm. The tools were lost at that depth but recovered and drilling resumed. In Russell County their test on the Clinchfield Coal Co. property is drilling in the Red Rock at 2,025 feet.

In West Virginia, the Benedum & Trees test on the Pocohontas Coal Co. tract in McDowell County has reached a depth of 4,645 feet without production and at present the tools are drilling in shale and shells.

In Pennsylvania, the gas test of the Plymouth Oil Co. on the John E. DuBois farm in Sandy Township, Clearfield County is drilling at a depth of 1,960 feet in sand, slate and shells.

In Southeast Ohio, the E. E. Grimm and others test on the E. E. Knowlton farm in Section 10, Independence Township, Washington County has resumed drilling at 4,650 feet, after replacing the old bull wheel and cementing a cave.

Central West Fields

(Continued from Preceding Page)

No. 6 on the R. K. Harris farm, Section 26, Jackson Township.

In Belmont County, Union Township, the O. K. Oil & Gas Co. has a gas well in a test on the Alice M. Adams farm, Section 20, in the Maxon sand from 1,027 to 1,031½ feet, and made a location for No. 1 on the W. M. and Cora Simpson farm, same township. A. C. Peters and others are drilling No. 1 on the Stephens-Knox farm, Section 27, Somerset Township, same county.

In Trumbull County, the Wittmer Oil & Gas Co. drilling a test on the H. G. Reibel farm, Lot 10, Farmington Township.

Indiana Fields

The important find in Indiana for the week was the bringing in of a gas well by the Wabash Public Service Co. in a test in the northwest corner of the C. Malone farm, SE Section 14, Columbia Township, Gibson County, with an initial flow of 2,500,000 feet from 1,515 to 1,519 feet. Murphy Oil Co. of Pennsylvania, abandoned No. 3 on the Alice Frederick farm, NE Section 6, Washington Township, same county.

William Bell and others drilled in a dry hole in the southwest corner of the Fay Murrey farm, SE Section 20, Clay Township, Pike County, at a depth of 1,559 feet.

In Sullivan County, the Siosi Oil Corp. abandoned No. 2 on the J. R. Thomas farm, Section 5, Fairbanks Township, and Charles Scott did the same with his No. 7 on the C. L. Davis farm, Section 14, Turman Township, same county. Charles Whitlock and others are drilling around 300 feet at a test on the W. M. Medsker farm, SE Section 24, same township. Parker & Heinds have a rig in for a test on the Johnson & Prather farm, Section 1, Hayden Township.

In Vigo County, Dr. C. C. Taliaferro, Jr., is shut down at 2,460 feet in his test on the B. F. Rynerson farm, Section 21, Prairie Creek Township, and the Siosi Oil Corp. is shut down at 2,114 feet in No. 22 on the William Riggs farm, Section 32, same township.

A. R. Morris and others are shut down at 1,600 feet in a test on the H. B. Brown farm, near the hamlet of Lyons, in Washington Township, Green County.

Illinois Fields

No completions were reported from the Illinois fields for the past week, and very little work is being done in the State. The test of Richard Eke and others on the H. Klair farm, Section 7, Waid Township, Jasper County, is shut down for unknown reasons, although no showings have as yet been reported. The Bryant Lee Petroleum Co. is shut down at a test on the William Langewich farm, Section 4, Centralia Township, Marion County. The Northern Indiana Oil & Gas Co. is also shut down at a test on the Mrs. Elizabeth Taylor farm, 8 miles southwest of Belvedire, in Boone County.

Two wells are still shut down according to reports in Monroe County. One is owned by Donaway and others on the Addie Delaney farm, Section 7, Columbia Township, and the other is Chambers and others' test on the Hy Huch farm, Section 24, Monroe Township.

Last report from the test drilling by by the Phillips Petroleum Co., on the W. R. Moss farm, Section 24, Elk Prairie Township, Jefferson County, is that it had reached a depth of 2,900 feet.

In Lawrence County, the Ohio Oil Co. abandoned No. 8 on the Ellen Lutz farm, NW Section 21, Dennison Township, and in Bridgeport Township, the same company abandoned No. 4 on the W. C. Miller farm, NW Section 20, and the Shilo Oil Co. abandoned No. 1 on the Clark & Morehead farm, SW Section 17, same township. The abandonments are old wells.

Good Wells in Kentucky

Some very large shallow sand producers were brought in since the last review of the Owensboro Field, in the Barrett Hill area of Ohio County, Kentucky. The largest oil producer was Goldberg and others' No. 2 well, 225 feet from the south line and 500 feet from the west line of the Roy Owens farm, which produced an initial of 450 bbls. In the same area, M. W. Damron and others' No. 4 well, 225 feet from the north line and 1,000 feet from the west line of the L. E. Morris farm, produced an initial of 200 bbls., and No. 5 well, 225 feet from the north line and 1,400 feet from the west line of the same farm, also showed an initial of 200 bbls.

In Ohio County the Ivyton Oil & Gas Co.'s No. 13, 800 feet from the south line and 900 feet from the west line of the R. A. Miller 275 acres, in the Haynesville Pool, reports an initial of 20 bbls. Snowden & McSweeny's test in the southeast corner of the Owen farm, in the Barrett Hill area, developed a dry hole.

In McLean County, Barrett Hill area, Miller and Damron's No. 3 well, 225 feet from the south line and 500 feet from the east line of the S. R. King farm, produced an initial of 80 bbls., while No. 4, 50 feet from the north line and 500 feet from the west line of the G. F. Dunn 100 acres, showed an initial of 120 bbls.

In Hancock County, H. A. Henry's No. 4 in the northeast corner of the Nora M. Chambers farm, reported a 5-bbl. pumper, while Vicars and others got a dry hole in the northeast corner of the John McFarrow farm, 3 miles north of the Haynesville Pool.

In Daviess County, S. M. Sherman's test, 225 feet from the north line and 225 feet from the south line of the Dave Pegron farm, in the Red Hill area, produced an initial of 40 bbls. Mida McMahan's No. 7 well, 900 feet from the north line and 120 feet from the east line of the Robert Jones farm, in the Jones Pool, was abandoned as dry at 640 feet. James C. Ellis drilled a dry hole 200 feet from the south line and 800 feet from the west line of the P. A. Howard farm, near Whitesville, in Daviess County.

Reports are that two gas wells have been brought in near State Highway 90, west of Burkesville, in Cumberland County. One of the wells is the C.M.&H. Oil Co.'s No. 1 L. E. Shelly 340-acre farm, 2 miles southwest of Burkesville, the other being Archie McGuire and others' No. 1 at the head of Morrowbone Creek, west of Burkesville.

Oil Prices Improve

Improved prices and a better demand for oil have increased employment, boosted production and almost doubled the income of the Owensboro Oil Field for the second quarter of 1932 as compared with the corresponding period of 1931. The entire first half of this year, however, shows a production and income decline of about 20 per cent in comparison with the first half of 1931, according to figures on file with the state tax commission.

The second quarter of 1931 marked the beginning of the shutdown movement in the field caused by price reductions, which in April cut production and income of the field almost in half and by July had reduced it to about a third of the March total.

In April, the start of the second quarter of this year, the increase in production and income began. Although the field's increase in April over March was not as marked as the decrease of a year previous, the trend was distinctly upward.

In the six counties included in this field, Ohio, Daviess, McLean, Hancock, Henderson and Muhlenberg, the production for April, May and June totaled 408,865 bbls. while during the same period of 1931 the production was 360,894 bbls. The income from the production during the second quarter of this year was $421,606.50 as compared with $237,378.81 for the same period of 1931.

For the first half of 1932 the production was 804,219 bbls. and for the corresponding period of 1931 the total was 1,093,354 bbls. The income for the six-month period of this year was $776,546.00 as compared with $951,254.91 for 1931.

While each of the counties in the field show a second quarter increase over a year ago, two counties also show increases for the entire six months of this year over the first half of 1931. They are Henderson County, with a production of 25,813 bbls. and income of $18,596.51 for the first half of 1931 compared with production of 32,529 bbls. and income of $31,647.93 for the first half of this year; and McLean County producers had an income of $54,347.34 for the first half of 1931 and $58,800.26 for the corresponding 1932 period.

Second Quarter Figures

Production and income listed by counties for the second quarter of 1931 and 1932 follow:

Ohio County—In 1931 there were 206,743 bbls. sold for $134,915.83, and in 1932 there were 216,358 bbls. sold for $223,819.29.

Daviess County — In 1931 production totaled 106,538 bbls. for $70,982.40, while in 1932 a total of 126,717 bbls. sold for $130,796.13.

Hancock County — In 1931 produced 13,114 bbls. which sold for $8,706.82, and for 1932 there were 12,158 bbls., selling at $12,574.65.

Henderson County—In 1931, a total of 8,358 bbls. for $4,540.18 and in 1932 71,070 bbls. for $17,735.06.

McLean County—In 1931, 21,053 bbls., which sold for $14,050.18, and in 1932, 31,165 bbls. were sold for $32,336.88.

Muhlenberg County — In 1931, 8,068 bbls. for $4,183.40, and in 1932, 5,396 bbls. sold for $4,344.49.

Figures for Six Months

For the first half of 1931 and 1932 the production and income of the counties in the field follows:

Ohio County — Production in 1931 amounted to 624,003 bbls. and sold for $547,731.30. In 1932 419,526 bbls. sold for $406,670.43.

Daviess County—In 1931, 330,146 bbls. brought $290,167.51; in 1932, 255,060 bbls. sold for $246,304.95.

Hancock County—In 1931, 33,979 bbls. for $28,536.58, and in 1932 25,203 bbls. for $24,325.97.

Henderson County — In 1931, 25,913 bbls. for $18,596.51; in 1932, 32,529 bbls. for $31,647.93.

McLean County—In 1931, 62,168 bbls. for $54,347.84, and in 1932, 60,568 bbls. for $58,800.26.

Muhlenberg County—In 1931, 17,445.29 bbls. for $11,875.17 and in 1932, $11,320.50 bbls. for $8,796.54.

VETERAN GAUGER DEAD

Daniel Ryan, 82 years of age, died at his home in Olean, N. Y., on August 22. Mr. Ryan, after several years with the Western Union Telegraph Co. as an operator, entered the service of the National Transit Co. in 1879 and from that time until 1921 when he retired on account of ill health was a gauger in the Bradford Field with headquarters in Duke Center, Pa.

LEGAL

Sale of Oil and Gas Leases, Department of the Interior. Notice is hereby given that 1,913.99 acres in the producing Hugoton gas field in Ts. 31 and 32, R. 38; Ts. 32 and 35, R. 39; Ts. 32 and 33, R. 40; all south and west of the 6th P.M., Kansas, Stevens and Morton Counties, and in T. 4, Ra. 14 and 15; Ts. 3, 4 and 6, R. 16, all north and east of C.M., Oklahoma, Texas County, are offered to the qualified bidder of the highest amount offered per acre as a bonus for the privilege of leasing the land under Section 17 of the act of February 25, 1920 (41 Stat. 437), in the court house in Hugoton, Kansas, at 10 a.m. o'clock on October 6, 1932. Full particulars governing the sale and the conditions upon which the leases will be issued may be secured from John T. Murphy, Chief of Field Division, Santa Fe, New Mexico. Written bids may be submitted addressed to Mr. Murphy and must be mailed so as to reach Santa Fe not later than 3:30 p.m., October 4, 1932 (two days before sale) and should be marked on the outside of the envelope "Bids on Gas Lands." Any written bid so received will be given consideration and the highest such bid for any tract be announced at the time of sale as the first bid. Should no higher oral bid be received, a tract may be awarded to the maker of the highest written bid. Bidders are warned against violations of the provisions of Section 59 of the U. S. Criminal Code, approved March 4, 1909, prohibiting unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids in the discretion of the Secretary of the Interior. Jos. M. Dixon, Acting Secretary of the Interior.

SUMMARY OF SHIPMENTS MADE AUGUST 10, 1932, RELATING TO BUSINESS OF VARIOUS PIPE LINES FOR MONTH ENDING JULY 31, 1932

	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
Nat. Transit	660,353.47	257,678.41	815,227.51	496,936.68	621,962.62
S. W. Pa. P. L.	544,191.17	66,303.16	746,391.87	516,488.97	270,434.99
Buraka P. L.	1,151,492.16	254,345.02	246,165.38	316,502.51	170,016.75
Buckeye P. L. (Macksburg)	287,514.51	224,866.44	164,036.04	268,503.80	140,339.27
Buckeye P. L. (Lima, etc.)	2,959,286.50	79,881.40	2,103,902.24	1,643,800.68	891,767.09
Buckeye P. L. (Cleveland)	32,720.25	10,799.40	328,397.64	1,231.63	234,102.87
Indiana P. L.	460,012.73	2,177.70	1,265,918.29	985,847.68	386,056.51
Southern P. L.	158,254.77	.....	32,179.40	65,700.09	68,734.40
Bradford Trans.	246,193.50	393,640.88	.....	423,645.01	.....
N. Y. Trans.	97,545.73	38,862.85	161,164.91	208,180.19	.....
Northern P. L.	271,630.29	.....	522,629.27	105,941.67	357,003.00
Tide Water P. L.	622,396.64	22,948.60	.....	438,003.22	.....
Tuscarora Dev.	8,601.80	.....	.....	262,578.32	.....
Total July 31	7,500,193.52	1,351,504.86	6,275,012.65	5,733,360.45	3,040,417.50
Total June 30	8,025,852.38	1,354,780.03	6,549,920.31	5,561,888.50	3,062,693.05
Difference	525,658.86	3,275.17	274,907.66	171,471.95	22,275.55

Wildcat Operations in Kansas

(Continued from Page 56)

Phillips Pet. Co.'s No. 1 Hochman, NE NW SE Section 17-16-7w ..... Rig.
Morgan's No. 1 Andrews, NE SW Sec. 3-17-8w ..... Spudded; S.D.
Walker et al's No. 1 Remley, SW SE NE Sec. 23-14-7w... Drlg. 2,630 ft.
Slick et al's No. 1 Dreford, SW NW Sec. 7-17-10w ..... Oil 3,371-77 ft.
R. Gear et al's No. 1 Kroboth, SE NW Sec. 12-15-10w.... S.D. 50 ft.
R. Gear et al's No. 1 Sanberth, C SW SE Sec. 29-16-9w.. Drlg. 2,815 ft.

FRANKLIN COUNTY

Smith et al's No. 1 Malcher, C SW SW Sec. 35-15-19..... Drlg. 630 ft.

FINNEY COUNTY

Joe Denham et al's No. 1 Brown, S SW Sec. 16-25-34w.... Rig.
National Ref. Co.'s No. 1 Wells, C SW Sec. 13-23-30w... Drlg. 5,645 ft.

FORD COUNTY

Swain et al's No. 1 Henthorn, C NW Sec. 21-25-24w..... Landing 5-in. csg. 5,205 ft.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w..... Rig.

HARVEY COUNTY

Liggett et al's No. 1 Davis, SW SE NE Sec. 7-24-1 ..... S.D. 3,127 ft.
Herndon, Blair, Deep Rock, No. 1 Santa Fe, C NW Sec. 19-22-1 ..... Drlg. 1,010 ft.

HASKELL COUNTY

Victor Martin et al's No. 1 Weeks, C NW Sec. 8-28-31w.. Rig.

KINGMAN COUNTY

Panhandle Drlg. Co.'s No. 1 Wetheral, C SE NW SW, Sec. 20-28-10w ..... Set 12-in. csg. 1,610 ft.; S.D.

LEAVENWORTH COUNTY

West et al's No. 1 Karb, C NW NE Sec. 32-10-21..... Drlg. 575 ft.

McPHERSON COUNTY

Darby Pet. Co.'s No. 1 Pankratz, NW SE Sec. 5-20-1 .... Digging cellar.
Snyder et al's No. 1 Carlson, SE cor. Sec. 4-19-2w..... S.D. 1,525 ft.
Detrick's No. 1 Dalke, NW SE Sec. 16-19-1 ..... Drlg. 2,229 ft.
Sidwell et al's No. 1 Nichols, NE NW NW Sec. 28-17-1n.. Drlg. 1,205 ft.
Simmons-Canary's No. 1 Krehbiel, SE NW Sec. 33-18-1w.. Siliceous 3,489-97 ft.; water; abnd.

MORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22, 34-43w ..... T.D. 3,640 ft.; temp. abd.

MORRIS COUNTY

Urschel et al's No. 1 Bersuch, NW SE NW Sec. 10-17-7... S.D. 915 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w..... Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15..... S.O. 2,190-2,200 ft.; temp. abnd.

PRATT COUNTY

Nimnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE Sec. 28-27-11w ..... S.D. 2,000 ft.

RENO COUNTY

National Union's No. 1 Hill, NE SE Sec. 18-24-4w ..... Location.
Martin et al's No. 1 Yadu, C NW NW Sec. 15-24-5w..... S.D. 318 ft.

RICE COUNTY

Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w..... Rig.
J. Liggett et al's No. 1 Thodel, C NW NW Sec. 11-21-7w.. S.D. 50 ft.

RUSH COUNTY

Barnsdall's No. 1 Schultz, SW cor. Sec. 3-19-16w..... Drlg. 885 ft.
Skelton et al's No. 1 Brock-Hartman, SW SE NE Sec. 4-18-16w ..... S.D. 50 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Wels, C W½ NE NW Sec. 20-13-4w ..... S.D. 3,511 ft.

SEDGWICK COUNTY

Scroggins et al's No. 1 Bartlett, NW SE NW Sec. 35-27-1 ..... Drlg. 1,065 ft.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW Sec. 27-7-26w..... H.F.W. 4,535-45 ft.; S.D.

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE Sec. 10-33-39w.... S.D. 5,521 ft.;

SUMNER COUNTY

Austin et al's No. 1 Fog, SW SE SE Sec. 14-34-1w..... Drlg. 1,550 ft.
Trees Oil Co.'s No. 1 Tompkins, SW Sec. 36-33-1 ..... Location.
Trees Oil Co. and Shell's No. 1 Springate, NE SE SW Sec. 6-34-2 ..... S.D. 3,639 ft.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 48)

Natchitoches Pet. Co.'s No. 1 Edenbarn, 2,240 ft. W. 1,320 ft. S, NE cor., Sec. 4-11-6w..... Set 10-in. 105 ft.
H. W. Perritt's No. 1 Cook, 165 ft. E, 165 ft. N, SW cor. NE SW, Sec. 3-8-9..... S.D. 2,992 ft.
Sabine Bayou Dev. Co.'s No. 1,130 Caw, 330 ft. N and E, SW cor. SE, Sec. 9-12-5 ..... S.D. for D.S. 1,080 ft.
Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 878 ft. N, 560 ft. E, C, Sec. 23-5-6 ..... S.D. 2,504 ft.

OUACHITA PARISH

Monroe Oil & Royalties Co.'s No. 1 Thieler, 150 ft. N and E, SW cor. SE NW, Sec. 34-18-2e ..... Drlg. 1,605 ft.
Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 240 ft. S, NW cor. SW SE..... S.D. 2,480 ft.

RED RIVER PARISH

C. F. Davis' No. 1 Pierson, 500 ft. S, 317 ft. E, NW cor. SW NW, Sec. 12-14-11..... Location.
Lawrence Decker, tr.'s No. 1 Madden, 1,650 ft. S and W, NE cor., Sec. 21-14-10 ..... S.D. 2,700 ft.
La. Oil Dev. Co.'s No. 2 La. Delta Pecan Co., 2,950 ft. S, 200 ft. E, NW cor., Sec. 27-13-11..... S.D. 50 ft.

RICHLAND PARISH

National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 20-18n-7e..... S.D. 3,515 ft.

SABINE PARISH

Adams & Roberson's No. 1 Peterson, 406 ft. N, 200 ft. W, SE cor. NE NE, Sec. 26-8-13 ..... S.D. 109 ft.
J. M. Bridges' No. 1 Moore, 660 ft. E, 330 ft. N, SW cor. NE NW, Sec. 5-9-12..... Set 10-in. 88 ft.
Bridwell O. & G. Co.'s No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NE NW, Sec. 31-8-10..... Set 10-in. 100 ft; S.D. for wtr. 1,000 ft.

Oil and Gas Pool Map

The Oil and Gas Journal has compiled, from information furnished by its branch editorial offices throughout the United States and Canada, a large wall map showing all oil and natural gas pools in the United States and Canada.

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Name .....

Company ..... Position .....

Address ..... City ..... State .....

9-1-32

R. E. Brooks's No. 1 A. Gray, 330 ft. N and W, SE cor. SW NE, Sec. 35-8-13 ..... Location.
J. H. Askew's No. 1 Henderson, 375 ft. N, 165 ft. E, SW cor. SW SE, Sec. 31-8-10 ..... Flowing 150 bbls. 2,497 ft.
V. V. Bull's No. 1 Henderson, 445 ft. S, 275 ft. E, NW cor. SE SE, Sec. 31-8-10 ..... Set 10-in. 42 ft.
John R. Bunn's No. 1 Sabine Lbr. Co., 295 ft. S, 330 ft. W, NE cor. SW NE, Sec. 9-7-13 ..... Drlg. 1,150 ft.
Cliff Oil Co.'s No. 1-A Martines School, 720 ft. N, 105 ft. W, SE cor. NE SE, Sec. 4-7-13 ..... W.O.S.R. 2,450 ft.
Clopton et al's No. 1 Campbell, 335 ft. S, 353 ft. W, NE cor. NW NE Section 6-7-11 ..... Fishing 2,557 ft.
Clopton et al's No. 1 Garcia, 330 ft. N and W, SE cor. SE NW Sec. 4-7-13 ..... Derrick.
W. M. Coates' No. 1 Gray, 330 ft. N and W, SE cor. SW, Sec. 3-7-13 ..... Location.
W. M. Coates' No. 2 Gray, 330 ft. S and W, NE cor. SE SW, Sec. 3-7-13 ..... Location.
Coates Pet. Co.'s No. 2 Stille, 330 ft. N and E, SW cor. SE SW, Sec. 35-8-11 ..... W.O.S.R. 2,465 ft.
Coates Pet. Co.'s No. 3 Stille, 330 ft. N and E, SW cor., Sec. 35-8-13 ..... Location.
The Coming Oil Co.'s No. 1 Cobb, 330 ft. N and E, SW cor., Sec. 14-7-11 ..... Dry and abd. 2,525 ft.
Crescent Drlg. Co.'s No. 1 Williams, 370 ft. E, 330 ft. S, NW cor. N½ SW, Sec. 21-7-12 ..... Rigging up.
Crescent Drlg. Co.'s No. 2 Williams, 330 ft. S and W, NE cor. SE NW, Sec. 21-7-13 ..... Location abd.
Mark Curtis et al's No. 1 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SE, Sec. 35-8-13 ..... Set 6-in. 2,019 ft.
B. Q. Daniels' No. 1 Armstrong, SE cor. SE NE, Sec. 31-8-10 ..... Derrick.
Mrs. Dabney's No. 1 Hill, 265 ft. N, 235 ft. W, SE cor. NE NE, Sec. 5-7-11 ..... Location.
Mrs. Dabney's No. 2 Hill, 230 ft. S, 235 ft. W, NE cor., Sec. 5-7-11 ..... Location.
R. E. Davidson's No. 1 Davis, 660 ft. S, 125 ft. E, NW cor., Sec. 28-7-11 ..... Set 10-in. 40 ft; S.D. 1,800 ft.
William DeSota's No. 1 Mooney, 350 ft. S, 395 ft. E, NW cor., Sec. 35-8-13 ..... Rigging up.
B. A. Ferrell's No. 1 Haley, Sec. 6-7-12, 300 ft. S and E, NW cor. NW SW ..... Testing 2,355 ft.
Flinchbaugh & Myers' No. 1 Aaron, 250 ft. S and E, NW cor., Sec. 32-9-13 ..... Derrick.
Harry Flinchbaugh's No. 1 Sepulbedo, 250 ft. N and E, SW cor. SE NE, Sec. 4-7-13 ..... W.O.S.R. 2,424 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 300 ft. W, NE cor. NW NW, Sec. 10-8-13 ..... S.D. 6,150 ft.
Gibson & Johnson, Inc.'s No. 1 Frost Lbr., 330 ft. S and E, from center Sec. 19-9-12 ..... Derrick.
Gibson & Johnson, Inc.'s No. 2 Frost Lbr., 330 ft. S and W, NE cor. NW NE, Sec. 15-9-13 ..... Rigging up.
W. N. Hankins' No. 1 Tilley, 300 ft. E, 30 ft. S, NW cor. SE SE, Sec. 30-8-13 ..... S.D. for wtr. 1,300 ft.
Hollis et al's No. 1 Sabine State Bank, 350 ft. N and W, SE cor. SW SW, Sec. 25-8-11 ..... Rigging up.
Howard et al's No. 1 Williams, 300 ft. N and E, SW cor. SE NW, Sec. 13-7-11 ..... W.O.S.R. 2,550 ft.
Ab Jones' No. 1 Garcia, 200 ft. S and W, NE cor. NW SE, Sec. 4-7-13 ..... S.D. for wtr. 1,710 ft.
G. E. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE, Sec. 34-8-11 ..... S.D. for wtr. 950 ft.
H. P. Keys' No. 1 Travis, 467 ft. N. 147 ft. E, SW cor. NE NW, Sec. 13-7-11 ..... Rigging up.
A. D. King, tr.'s No. 1 Davis, 170 ft. N, 410 ft. E, SW cor. NW NE, Sec. 29-7-11 ..... Location.
A. D. King, tr.'s No. 1 T. L. Andrics, 200 ft. S, 300 ft. E, NW cor. SE SE, Sec. 15-7-11 ..... Derrick.
S. A. Lane et al's No. 1 DeKeyser, 233 ft. E, 330 ft. S, NW cor. NE, Sec. 28-7-11 ..... S.D.; W.O. 2,930 ft.
Geo. LeGrand's No. 1 McGough, Sec. 3-8-10 ..... Drlg. 1,500 ft.
Magnolia Pet. Co.'s No. 1 Williams, 165 ft. S, 408 ft. W, NE cor. NW, Sec. 6-7-10 ..... Flowing 70 bbls. 2,490 ft.
R. C. Maulding's No. 1 Moores, 330 ft. S and W, NE cor. SE NE Sec. 16-7-13 ..... Set 10-in. 50 ft; drlg. 450 ft.
Paul L. Miller's No. 1 Lucius, 175 ft. N and W, SE cor. NE SW, Sec. 31-8-10 ..... T.A. 2,750 ft.
Paul L. Miller, tr.'s No. 1 Chadick, 550 ft. S, 178 ft. E, NW cor. NE SW, Sec. 32-8-10 ..... Set 10-in. 40 ft; drlg. 370 ft.
Ray Murray's No. 1 Lefkobits, 210 ft. S, 330 ft. W, NE cor., Sec. 5-7-13 ..... S.D. for wtr. 2,321 ft.
Hill Myers' No. 1 Garcia, 200 ft. N and W, SE cor. SW NW, Sec. 4-7-13 ..... Dry and abd. 2,463 ft.
E. F. Neely's No. 1 Raina, 660 ft. N, 100 ft. W, SE cor., SW NW, Sec. 14-7-11 ..... W.O.S.R. 2,541 ft.
E. F. Neely's No. 1 Ponder, 150 ft. S and W, NE NE, Sec. 16-7-11 ..... Set 10-in. 40 ft; S.D. 400 ft.
W. M. Neely's No. 1 Buvens, 350 ft. S, 100 ft. E, NW cor. NE, Sec. 21-7-11 ..... Location.
C. D. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft. N, 660 ft. W, SE cor. Sec. ..... W.O.S.R. 2,599 ft.
Palmer & Smitherman's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and E, NW cor. NE SE ..... Location.
Palmer & Smitherman's No. 2 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. SE, Sec. 12-7-11 ..... Location.
Pelican Natural Gas Co.'s No. 2 Buckley, 330 ft. S and W, NE cor. NW NW, Sec. 6-7-10 ..... Dry and abd. 2,307 ft.
H. W. Perritt's No. 3 Brown Lbr. Co., 513 ft. S, 455 ft. W, NE cor. NW NE, Sec. 31-8-10 ..... S.D. 140 ft.
Roy Raines et al's No. 1 Beard, 730 ft. E, 700 ft. N, SW cor. SW SE, Sec. 8-8-10 ..... Derrick.
Thornton et al's No. 1 S. S. Martinez, 355 ft. S, 330 ft. W, NE cor. SE NE, Sec. 4-7-13 ..... Drlg. plug 2,048 ft.
Otis A. Roberts' No. 1 Sabine Lbr. Co., 234 ft. S, 481 ft. W, NE cor. SW NE, Sec. 5-7-13 ..... Bailing 2,454 ft.
Robeete & Sledge's No. 1 Lefkobits, 346 ft. S, 672 ft. E, NW cor. SE NE, Sec. 5-7-13 ..... Derrick pattern.
Robeete & Sledge's No. 2 Sabine Lbr. Co., 803 ft. W, 796 ft. N, SE cor. SE SW, Sec. 5-7-13 ..... Testing 2,284 ft.
Robeete & Sledge's No. 3 Sabine Lbr. Co., 413 ft. N, 479 ft. W, SE cor. SE SW, Sec. 32-8-13 ..... Derrick.
Bill Rowe's No. 1 Sepulbedo, 630 ft. N, 200 ft. E, SW cor. SE SE, Sec. 4-7-13 ..... S.D. 2,005 ft.
Skully & Beach's No. 3 Lafitte, 1,400 ft. S, 133 ft. W, NE cor. NW NW, Sec. 13-7-11 ..... Location.
Skully & Beach's No. 2 Lafitte, 140 ft. S, 238 ft. E, NW cor., Sec. 13-7-11 ..... S.D. 2,449 ft.
R. B. Smith et al's No. 1 La. Long Leaf Lbr. Co., Sec. 13-7-11, 330 ft. S and W, NE cor. NW SW ..... Location.
W. W. Smith et al's No. 1 Sepulbedo, 330 ft. N, 350 ft. W, SE cor., Sec. 4-7-13 ..... Tested dry; W.O. 2,424 ft.
Snead & Sneed's No. 1 Pearce, 300 ft. N, 215 ft. E, SW cor. NE SW, Sec. 35-8-13 ..... S.D.; W.O. 2,495 ft.
Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE, Sec. 13-9-11 ..... S.D. 1,905 ft.
H. B. Stacey et al's No. 1 Hofkobits, 457 ft. N, 533 ft. E, SW cor. SE, Sec. 34-8-13 ..... Set 10-in. 62 ft; drlg. 1,250 ft.
State Prod. Co., Inc.'s No. 1-B Davis, 200 ft. N and E, SW cor., Sec. 17-7-10 ..... Derrick.
Supreme Oil Co.'s No. 1 Pruitt, 330 ft. N and E, SW cor. SE SW, Sec. 30-8-11 ..... S.D. 1,706 ft.
B. E. Taylor's No. 1 Gay, 333 ft. S, 476 ft. E, NW cor. SE SW, Sec. 36-8-13 ..... Location.
B. E. Taylor's No. 1 Wooley, 330 ft. N and E, SW cor. SE SW, Sec. 36-8-13 ..... Location.
A. F. Tarver's No. 3 Cutrer, Sec. 13-7-11, 1,320 ft. E, 300 ft. N, SW cor. NW ..... W.O.S.R. 2,600 ft.
Thornton et al's No. 2 S. S. Martinez, 512 ft. E, 205 ft. S, NW cor. SE NE, Sec. 4-7-13 ..... Location.

A. A. Trammell's No. 1 Sepulbedo, 330 ft. N and W, SE cor. NW NE, Sec. 5-7-13 ..... Derrick.
Triangle Drlg. Co.'s No. 1 La.-Long Leaf Lbr. Co., 330 ft. N and W, SE cor. Sec. 11-6-11 ..... Drlg. 4,000 ft.
Tuffree et al's No. 1 T. L. Andries, N½ NE SE, Sec. 15-7-11 ..... S.D. 100 ft.
W. C. Turnbow's No. 1 Williams, 300 ft. W C E line SW NW, Sec. 13-7-11 ..... Flowing 100 bbls. 2,600 ft.
C. C. Walker's No. 1 Noble-Neely, 330 ft. S and E, NW cor. SW, Sec. 36-8-13 ..... S.D. 1,750 ft.

TENSAS PARISH

H. V. Schumacker's No. 1 Curroy, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 ..... Drlg. 3,610 ft.

VERNON PARISH

Earl Jones' No. 1 Willis, 350 ft. N, 400 ft. E, SW cor. SE SE, Sec. 32-3n-9w ..... Derrick.
Llano Co-operative Colony's No. 1 fee, NW NE, Sec. 34-3n-9w ..... S.D. for fuel 1,540 ft.

WEBSTER PARISH

George Pearce et al's No. 1 Ambrose, 200 ft. N and W, SE cor. SW SE, Sec. 22-20-10 ..... Drlg. 1,060 ft.

WINN PARISH

P.V.T. Oil Co.'s No. 1 Southern Paper Co., 150 ft. S and W, NE cor. SW, Sec. 25-13-3 ..... Drlg. 430 ft.

Arkansas

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-3 ..... 1,253 ft.

CLEBURNE COUNTY

Frank S. Craver et al's No. 2 Doniphan Lbr. Co., 700 ft. N, 200 ft. E, SW cor. SW, Sec. 34-11-9 ..... Drlg. 138 ft.

CLEVELAND COUNTY

Crum & Stillwell's No. 1 E. R. Bell, Sec. 10-10s-13 ..... Rigged up and S.D.

DALLAS COUNTY

J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 300 ft. S, 300 ft. E, NW cor. SE, Sec. 11-9-15 ..... S.D. 2,575 ft.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW ..... Drlg. 3,135 ft.

FRANKLIN COUNTY

Ozark Natural Gas Co.'s No. 1 Monroe, C NW NE, Sec. 13-8-29 ..... Set 10-in. 179 ft; drlg. 575 ft.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16 ..... S.D. 1,340 ft.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7 ..... Reaming 2,935 ft.

LITTLE RIVER COUNTY

Harrell et al's No. 1 Taffee, 22 ft. W, 630 ft. E, 330 ft. S, SW cor. W NW, Sec. 25-12s-32w ..... Drlg. 2,235 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 1 Stone, SE cor. SW, Sec. 32-14-26 ..... S.D. 2,535 ft.
Goodwin et al's No. 1 E. A. McCowand, NW cor. NW SE, Sec. 22-15-28 ..... Derrick pattern.
Fitzwater et al's No. 1 C. J. Norsen, SW cor. SE SW, Sec. 20-15-27 ..... Set 10-in. 121 ft.
Fitzwater et al's No. 1 Beck, Sec. 33-15-26 ..... Drlg. 2,928 ft.
Fitzwater et al's No. 1 Fouke, 150 ft. S and W, NE cor., Sec. 11-17-27 ..... Derrick (corrected).
W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27 ..... S.D; W.O. 2,600 ft.

OUACHITA COUNTY

Copenhaven et al's No. 3 Berg, C SE SE, Sec. 13-15-17 ..... W.O.S.R. 2,208 ft.
McLean et al's No. 1 L. D. Neely, Sec. 33-15-16, 200 ft. N and W, SE cor. NE SW ..... S.D. 150 ft.
Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Section 36-12-18 ..... S.D. 525 ft.

PIKE COUNTY

E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 21-8-24 ..... S.D.; W.O. 1,020 ft.
E. R. Henderson's No. 1 W. B. East, 200 ft. S, 150 ft. W, NE cor., Sec. 13-9-23 ..... Rigging up on new hole.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 3-4n-6w ..... Partly rigged up and S.D.

SCOTT COUNTY

Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29 ..... S.D. 1,860 ft.

SEVIER COUNTY

Tristate Oil Co.'s No. 1 Grimble, Sec. 34-8-22, S½ SW ..... S.D. 950 ft.

ST. FRANCIS COUNTY

E. R. Henderson's No. 1 Britton, Sec. 1-4-1e, 1,000 ft. S and E NW cor. NE NW ..... Drlg. 2,335 ft.

UNION COUNTY

Cox et al's No. 1 Goodwin, 260 ft. S, 130 ft. W, NE cor. SW SW, Sec. 2-16-16 ..... S.D. 140 ft.
H. H. Helms' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-16-14 ..... S.D. 2,375 ft.
Wilson & Chapman's No. 1 King, Sec. 3-18-13, 330 ft. N and E, SW cor. NE NE ..... Derrick.
Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE, Sec. 3-18-13 ..... S.D. 1,678 ft.

WASHINGTON COUNTY

(Cable tools)

A. B. Chase and Ed Rogers' No. 1 Cunningham, 125 ft. S, 300 ft. W, NE cor. SW NE, Sec. 14-15-32 ..... S.D. 1 750 ft.

East Texas

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 3,500 ft. W, NE cor. Chas. Lewis Sur. ..... S.D. 4,505 ft.
Lanford et al's No. 1 W. W. Whybark, 300 ft. S, 300 ft. W, SW cor. J. H. Dyer Sur. ..... Reaming 1,792 ft.

CASS COUNTY

Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 38-ac. tr., Albert H. Lattimer Sur. ..... S.D. 2,860 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.
John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 379 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur. ..... S.D. 2,280 ft.
John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 960 ft.

HARRISON COUNTY

M. B. Nash et al's No. 1 Henderson, G. L. Bledsoe Sur. ..... S.D. 85 ft.
Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. ..... Rigged up and S.D.
Triangle Drlg. Co.'s No. 1 Platt, 1,125 ft. W, 1,995 ft. N, SE cor. F. C. Barker Sur. ..... Location.

MARION COUNTY

Bannoch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E, SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) ..... Drlg.
Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,800 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. ..... S.D. 2,380 ft.
Purcell et al's No. 1 Coker, M. Reed Sur. ..... S.D. 1,957 ft.

PANOLA COUNTY

Moses & Wallace's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur. ..... S.D. for D.S. 740 ft.
J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in James Hanks Sur. ..... S.D. 2,055 ft.

SHELBY COUNTY

E. H. Francis' No. 1 John Mims, Mary Smith Sur. ..... S.D. 1,275 ft.

General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur. ..... Drlg. 750 ft.
Henry Mauiding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 20-ac. tr., A. D. Fountain Sur. ..... Rigged up and S.D.
Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. N and 200 ft. W from SE cor. 42-a. tr. of J. Barleson Sur... Drlg. 1,750 ft.
Ridgeway et al's No. 1 Polley, Dominguez Gonzales Sur., 2,180 ft. E of SW cor., 180 ft. N at right angles of Polley 467-ac. tr. ..... S.D. 2,375 ft.
Sedberry et al's No. 1 Pickering Lbr. Co., 400 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur. ..... S.D. 2,375 ft.
Western World's No. 1 Foster, Billingsby-Jeremiah Bowlin Sur. ..... S.D. 2,940 ft.
Wray & Dunbar's No. 1 C. A. Hayden, 600 ft. N and W SE cor. 152-ac. tr. in D. T. F. Yordt Sur. ..... S.D. 2,183 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

CADDO PARISH

Company, well, farm name, section and block—	Remarks:
D. C. R. Oil Co.'s No. 1 Caddo School Board, 2,125 ft. S, 1,500 ft. W, NE cor., Sec. 16-19-14	Set 10-in. 103 ft; drlg. 150 ft.
Louana Oil & Gas Co.'s No. 1 Cushman, 1,850 ft. N, 600 ft. E, SW cor., Sec. 33-19-16	T.A. 2,800 ft.

CLAIBORNE PARISH

Triangle Drlg. Co.'s No. 1 Brown, 1,542 ft. N, 1,900 ft. W, SE cor. NE, Sec. 1-19-6	Drlg. 4,242 ft.

MOREHOUSE PARISH

United Gas Public Service Co.'s No. 8 Sandidge, 987 ft. S, 33 ft. E, NW cor., Sec. 26-20-4e	Set 12½-in. 169 ft; drlg. 425 ft.

OUACHITA PARISH

Carbon Con.'s No. 7 Guthrie, Sec. 50-20n-4e, 5,262 ft. N, 7,475 ft. W of cors. of Secs. 25, 26 and 49, in Sec. 50	Location.

RICHLAND PARISH

Pelican Nat. Gas Co.'s No. 1 Noe, C W½ NE, Sec. 14-17-5e	Rigging up.

SABINE PARISH—ZWOLLE

Abbott & Rankin's No. 1 Nulton, 330 ft. S and E, NW cor. SE NE, Sec. 2-7-13	Derrick.
Abbott & Rankin's No. 1 Towley, 330 ft. S and E, NW cor. SE NW, Sec. 1-7-13	W.O.S.R. 2,340 ft.
J. O. Andree's No. 1 Sabine Lbr. Co., 330 ft. S and E, NW cor. SW NW, Sec. 11-7-12	Set 10-in. 49 ft.
J. H. Askew's No. 1-E McNeely, 220 ft. S, 260 ft. W, NE cor. SE NE, Sec. 14-7-11	Set 6-in. 2,367 ft.
J. H. Askew's No. 1 Lyons, 330 ft. W, 352 ft. N, SE cor. SE NE, Sec. 31-8-10	Derrick.
Baird Bros.' No. 2 S. S. Martinez, NW cor. NW SW Sec. 2-7-13	Flowing 300 bbls. 2,105 ft.
Cameron Oil Co.'s No. 1 G. Martinez, 845 ft. E, 540 ft. N, SW cor., Sec. 2-7-13	Derrick.
Coates Pet. Co.'s No. 2-B Nulton, 330 ft. N and E, SW cor. SW NE, Sec. 2-7-13	W.O.S.R. 2,396 ft.
Coates Pet. Co.'s No. 4 S. S. Martinez, 97 ft. S, 215 ft. W, NE cor. NE SE, Sec. 3-7-13	Derrick.
Continental Drlg. Co.'s No. 1 Leone est., 70 ft. N, 200 ft. W, SE cor., Sec. 31-8-12	Derrick.
Dengall O. & G. Co.'s No. 1-F Nulton, 330 ft. S and E, NW cor. SW NW, Sec. 2-7-13	W.O.S.R. 2,501 ft.
Dengall O. & G. Co.'s No. 2-G Nulton, 330 ft. N and E, SW cor. NE NE, Sec. 3-7-13	S.D; W.O. 2,475 ft.
Edwards & Hubier's No. 1 G. Martinez, 510 ft. S, 280 ft. E, NW cor. SW SW, Sec. 2-7-13	Derrick.
J. E. Grandstaff's No. 1 Johnson, S½ SW SW, Sec. 2-7-11	Set 6-in. 2,328 ft.
E. W. Gill's No. 1 Gray, 200 ft. S and W, NE cor. SW SW Sec. 3-7-13	Coring 2,045 ft.
J. J. Hall's No. 4 Jacoba, 175 ft. W, 300 ft. N, SE cor. Sec. 1-7-11	Set 6-in. 2,412 ft.
D. D. Holcomb's No. 2 Quayhagiew, 149 ft. N, 200 ft. E SW cor. SE SE, Sec. 11-7-11	Drlg. 2,000 ft.
Hutchini et al's No. 1 Garcia, 382 ft. N, 354 ft. W, SE cor. NE SW, Sec. 4-7-13	Fishing 2,420 ft.
Imperial Producers Co.'s No. 1 Leone Est., 1,334 ft. S, 660 ft. E, NW cor., Sec. 32-8-12	Location.
H. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW, Sec. 14-7-11	Set 10-in. 40 ft.
E. T. Kilgore's No. 1 Pate, 330 ft. N and W, SE cor. NE NE, Sec. 32-8-11	Set 10-in. 42 ft.
A. D. King, trustee's No. 1 Webb, 300 ft. S and E, NW cor. NW SW, Sec. 31-8-11	Bailing 2,400 ft.
Lanier et al's No. 2 Steinhorst, 150 ft. S and W, NE cor. SE NW, Sec. 2-7-13	Set 10-in. 42 ft.
Lion Oil Ref. Co.'s No. 2 LaRoux, 384 ft. S and W, NE cor. SW SE, Sec. 3-7-13	Location.
Loring Oil Co.'s No. 15 Bowman-Hicks, 1,280 ft. S, 275 ft. E, NW cor. SW NW, Sec. 15-7-13	S.D. 5,272 ft.
Lyons & Neely's No. 4 Byrd, NE cor. SW SW, Sec. 1-7-11	Set 10-in. 40 ft; drlg. 150 ft.
H. D. McDonald's No. 1 T. L. Andrin, 180 ft. E, 150 ft. N, SW cor. NW SE, Sec. 15-7-11	Derrick.
Frank Melat's No. 1 Davis, 175 ft. W, 225 ft. S, NE cor., Sec. 2-7-11	Set 6-in. 2,338 ft.
Ben Merritt, trustee's No. 1 Chadick, SW cor. SW NE, Sec. 31-8-10	S.D. 38 ft.
C. D. Neff, tr.'s No. 1 Stoker, 212 ft. N and W, SE cor. NE SW, Sec. 10-7-11	Derrick.
Pelican Nat. Gas Co.'s No. 15 Louisiana Long Leaf Lbr. Co., 330 ft. N and W, SE cor. SE SW, Sec. 5-7-11	S.D; W.O. 2,600 ft.
Pelican Nat. Gas Co.'s No. 16 La. Long Leaf Lbr. Co., 56 ft. S, 544 ft. W, NE cor. NW NE, Sec. 10-7-11	Location.
T. L. Phillips et al's No. 1 Haley, 330 ft. S and E, NW cor. NW SE, Sec. 6-7-12	Derrick.
H. C. Pitts et al's No. 1 Trammell, 1,037 ft. S, 150 ft. E, NW cor. NE NE, Sec. 5-7-11	Location.
Ritchie Prod. Co.'s No. 1 Byrd, 503 ft. N, 399 ft. W, SE cor. NE NW, Sec. 1-7-11	Derrick pattern.
O. J. Rowe's No. 2 Williams, 170 ft. N, 200 ft. E, SW cor. SW NW, Sec. 13-7-11	Location.
C. T. Ruffian's No. 2 Libby, 330 ft. S and E, NW cor. NE NW, Sec. 8-7-11	W.O.S.R. 2,454 ft.
Sabine Prod. Co.'s No. 3 Pearce, Sec. 10-7-11, 330 ft. S and E, NW cor. SE NW	S.D.; W.O. 2,699 ft.
Sabine Prod. Co.'s No. 2 Sabine Lbr. Co., 330 ft. S and E from center of Sec. 3-7-13	Dry and abd. 2,450 ft.
Service Drlg. Co.'s No. 3-A Gardner, 138 ft. S, 134 ft. W, NE cor., Sec. 12-7-11	W.O.S.R. 2,455 ft.
Skidmore Oil Co.'s No. 1 G. Martinez, 396 ft. E, 330 ft. S, NW cor. SE SE, Sec. 3-7-13	Set 10-in. 40 ft; drlg. 900 ft.
Ben F. Smith's No. 2 Turner, 250 ft. N, 450 ft. E, SW cor. NW NW, Sec. 4-7-11	S.D. for wtr. 700 ft.
W. S. Smith, trustee's No. 1 Hamilton, 330 ft. N and E, SW cor. NE NE, Sec. 32-8-11	Derrick.
F. E. Stancil's No. 1 Pounder, 273 ft. S, 397 ft. E, NW cor. NE SE, Sec. 10-7-11	S.D. 2,593 ft.
F. E. Stancil's No. 2 Pounder, 305 ft. N, 383 ft. E, SW cor. SE SE, Sec. 10-7-11	Location.
State Prod. Co.'s No. 1 Keasele, 150 ft. N and W, SE cor. NW SW, Sec. 2-7-13	S.D. 1,600 ft.
State Prod. Co.'s No. 1 Lites, 150 ft. S and W, NE cor. SE SW, Sec. 28-8-11	Location.
State Prod. Co.'s No. 1 Sabine Lbr. Co., 265 ft. N, 100 ft. W SE cor. NW SW Sec. 3-7-13	Drlg. 2,375 ft.
H. H. Stout et al's No. 1 Byrd, 150 ft. N and E, SW cor. NW NW, Sec. 1-7-11	Rigging up.
The Texas Company's No. 2 Maines, 330 ft. N and E, SW cor. SE, Sec. 5-7-11	Set 6-in. 61 ft; set 6-in. 2,295 ft.
The Texas Company's No. 2 Nabours, 576 ft. W, 237 ft. S NE cor. SE, Sec. 2-7-11	Dry and abd. 2,650 ft.
The Texas Co.'s No. 4 Stille, 530 ft. E, 330 ft. N, SW cor., Sec. 33-8-11	Location.
A. A. Trammell's No. 1 Hill, 330 ft. S and W, NE cor. SE SE, Sec. 32-8-11	Drlg. 2,393 ft.
C. H. Tuttle's No. 3 Byrd, 700 ft. E, 510 ft. S, NW cor., Sec. 7-7-10	Set 10-in. 42 ft; drlg. 980 ft.
J. P. White's No. 1 Nulton, 330 ft. N and E, SW cor. NE NW, Sec. 1-7-13	S.D. 2,455 ft.
George Woulf's No. 1 Nulton, 330 ft. S, 380 ft. E, NW cor. SW NE, Sec. 3-7-13	Set 6-in. 2,034 ft

UNION PARISH

Nemours Corp.'s No. 1 Moore, Sec. 24-20-3e	Set 12½-in. 185 ft; set 6-in. 2,085 ft.
Southern Carbon Co.'s No. 61 fee, 2,310 ft. N, 660 ft. E, SW cor. SE, Sec. 17-20-4e	Set 12½-in. 185 ft; set 8-in. 370 ft.

Arkansas

UNION COUNTY—URBANA

Artex Oil Co.'s No. 1 Goodwin, 330 ft. N and W, SE cor., Sec. 31-16-15	S.W. and abd. 2,139 ft.
Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13	T.A. 3,586 ft.
Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13	Location.
Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W, NE cor. SE NW	T.A. 3,545 ft.
Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE	S.D. 1,730 ft.

East Texas

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur.	S.D. 3,359 ft.
United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele lse., in B. C. Jordan Sur.	Location.

Mississippi

HINDS COUNTY

Ridgeway & McGehee's No. 2 Mosal, 300 ft. W, 300 ft. N. SE cor. NE SW, Sec. 24-6n-1e	Comp. 31,250,000 ft. gas 2,494 ft.

RANKIN COUNTY

Meredith-Smith's No. 4 Strowder, 616 ft. S, 2,878 ft. W, NE cor., Sec. 12-5n-1e	Derrick.

Wildcat Operations in Mississippi

CLARKE COUNTY

Company, well, farm name, section and block—	Remarks:
F. X. Gowans et al's No. 1 Elfring, SE NE, Sec. 13-1n-14e	S.D. 104 ft.

HINDS COUNTY

Atkins et al's No. 1 Crane Lawrence, Sec. 23-6n-1e, 300 ft. E, 132 ft. N, SW cor. NE SE	Drlg. 2,520 ft.

LAMAR COUNTY

Stauffer & Kouri's No. 1 Bond, SE NE, Sec. 18-2n-14w	Drlg. gumbo 2,435 ft.

LOWNDES COUNTY

Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e, 1,320 ft. E, 330 ft. S, NW cor. Sec.	Arranging to resume drlg. 2,100 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 22-15s-17w	Drlg. 1,725 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE, Sec. 25-6n-11e	S.D. 1,520 ft.

NOXUBEE COUNTY

Thompson & Donohue's No. 1 Donohue, Sec. 25-16n-17e	Repairing derrick; T.D. 1,735 ft.

RANKIN COUNTY

Love Pet. Co.'s No. 2 Int. Lbr. Co., 450 ft. S and E, NW cor., Sec. 28-6n-2e	Drlg. 1,050 ft.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e	Derrick

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9	S.D. 750 ft.

Wildcat Operations in Alabama

LAMAR COUNTY
(Cable tools)

Company, well, farm name, section and block—	Remarks:
DeSoto O. & G. Corp.'s No. 1 Gardner, NW NW, Sec. 22-16s-16w	Drlg. 3,148 ft.

MOBILE COUNTY

Ohio Oil Co.'s No. 1 James Bethel, 330 ft. N and E, 3,300 ft. E of NW cor. SW SE, Sec. 34-3s-2w	Dry and abd. 5,681 ft. (corrected).
J. C. Prine et al's No. 1 M.&O.R.R., Sec. 33-2n-4w	D.S. stuck 700 ft; T.D. 2,613 ft.

WASHINGTON COUNTY

South Alabama O. & G. Co.'s No. 1 Wilson, Sec. 26-7n-1w	Rigging up.

Gulf Coast Fields and Wildcats

(Continued from Page 44)

Gulf Prod. Co. and Humble O. & R. Co.'s No. 2-A F. I. Booth (second hole), Samuel Kennedy Sur., 75 ft. S of No. 2-A (first hole)	Sandy shale showing oil 5,285 ft.
Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 3-A T. I. Booth, Samuel Kennedy Sur., 200 ft. due S The Texas Company's No. 1 Wolters	Drlg. lime 2,335 ft.
Gulf Prod. and Humble O. & R. Co.'s No. 4-A F. I. Booth, 300 ft. S and W, SW cor. of Gubbels 100-ac. tr., Blk. 4, Samuel Kennedy Sur.	Derrick
Gulf Prod. Co. and Humble O. & R. Co.'s No. 5-A F. I. Booth, 400 ft. E and 300 ft. S of SW cor. of Gubbels 100-ac. tr., Blk. 4, Samuel Kennedy Sur.	Location.
Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 3 T. R. Booth, Samuel Kennedy Sur., 2,991 ft. from W line and 487 ft. from E line of E half of tract (452 ac.)	Derrick.
Gulf Prod. Co. and Humble O. & R. Co.'s No. 4 Meyers, John Rabb Sur., 250 ft. E of No. 3	Rig.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 3 Davis, Robt. Peebles Sur., 2,985 ft. from W line and 350 ft. from N line	Drlg. sticky shale 912 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 5 George, John Rabb Sur., 1,000 ft. E of No. 4	Location.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 2-B George, John Rabb Sur., 1,000 ft. from W line and 330 ft. from N line of "B" lease	Drlg. sandy shale 4,112 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 4 Lockwood-Second hole, John Rabb Sur., 250 ft. E of No. 4 Lockwood-First hole	Drlg. shale and lime 1,930 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 5 Lockwood, John Rabb Sur., 300 ft. from N line and 1,000 ft. from W line of 320-ac. tract	Location.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 8-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. W, 300 ft. S NE cor. of 359.3-ac. tract	Drlg. shale 3,596 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 4-B Lockwood & Sharp, J. Rabb Sur., 1,242 ft. from W line and 526 ft. from S line of tr.	Rig.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 3-B Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from E line and 300 ft. from N line of Tr. 1 (933.75 ac.)..Set 60 ft. of 5-in. screen, 5,344 ft.; comp. flowing 52 bbls. hourly, 580 lbs. pressure, ½-in. choke.

The Texas Company's No. 2 Wolters, Samuel Kennedy Sur., 350 ft. out of SE cor. of 100-ac. lease.....Rig.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 30 Cade, N. Fitzsimmons Sur., 300 ft. NE of No. 28 in line parallel with NW line Blk. 15.....Drlg. hard sand 4,420 ft.

Yount Lee Oil Co.'s No. 31 Cade, N. Fitzsimmons Sur., midway between and in line with Nos. 21 and 29 Cade.....Drlg. hard sand and lime 3,742 ft.

Yount Lee Oil Co.'s No. 2 Broussard & Orme, Martin Duman Sur., 300 ft. SE of No. 1.....Drlg. shale 5,502 ft.

Yount Lee Oil Co.'s No. 12 Smith, Martin Dunman Sur., 330 ft. W of No. 11 and 100 ft. N of No. 3.....Drlg. sand and lime 4,022 ft.

Yount Lee Oil Co.'s No. 2 M. M. Spencer, Martin Dunman Sur., center of tract in line with No. 11 Smith and No. 2 Nellie League.....Drlg. sand and lime 4,705 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 87-A "J".....Drlg. shale and gumbo 337 ft.

SOUR LAKE—HARDIN COUNTY

Jackson Mineral Oil Co.'s No. 1 Lula Hebert, 50 ft. from N line and 72 ft. from E line of 2-acre tract, Lot 3, Stephen Jackson Sur......Derrick.

Prudential Oil Co.'s No. 1 Maco Stewart, Stephen Jackson Sur., 1,050 ft. from S line and 150 ft. from W line of 50-acre tract.....T.D. 4,000 ft; set 2 joints of 4½-in. screen in sandy shale 3,955-97 ft.; comp. flowing 800 bbls., 300 lbs. pressure, ½-in. choke; gravity 35.2° (cor.).

HUMBLE—HARRIS COUNTY

Burt & Deerings No. 2 C.O.&G.-Texas Co. fee, J. B. Stephenson Sur., 50 ft. E and 50 ft. S of SE cor. of Wheeler & Pickens Blk. 24 in 25-acre tract.....Set screen 1,870 ft; swbng.

J. D. Clay's No. 2 Bender, R. Dunman Sur., 150 ft. from S line and 50 ft. from E line of 100-acre tract.....T.D. 1,225 ft; sand 1,183-1,217 ft; set 2 joints of 4½-in. screen.

Rio Bravo Oil Co.'s No. 1 Westheimer, 965 ft. W and 300 ft. N of SE cor. of Westheimer Said., John Jones Sur......Anhydrite 2,723-80 ft; abd.

Sun Oil Co.'s No. 28 Bender, W. B. Adams Sur......Derrick.

Sun Oil Co.'s No. 59 River, R. Dunman Sur., 74 ft. from E line and 1,441 ft. from S line of block.....No report.

The Texas Co.'s No. 26 House, Mary Owens Sur., 100 ft. W of No. 20.....Cmtd. hole 3,757-3,831 ft.

MYKAWA—HARRIS COUNTY

Crown-Framer Oil Co.'s No. 1-A Sladous, Wm. Lovett Sur., 75 ft. due W of No. 1.....Drlg. sandy shale 2,622 ft.

Crown-Framer Oil Co.'s No. 3 Minnetex, 100 ft. from N line and 100 ft. from E line of W half of Block 251, Wm. Lovett Sur......Location.

Hamill & Smith's No. 1 Ward, 50 ft. out of SE cor. of Ward 10-ac. tract, Blk. 186, Wm. Lovett Sur......Rig.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Production Co.'s No. 85 Taylor, Hamilton Sur. No. 52, 50 ft. S of No. 1.....Drlg. sticky shale 4,436 ft.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 6 Burrell, Wm. Smith Sur......Derrick.

SPINDLETOP—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 233 Gladys, J. A. Veatch Sur......Drlg. gumbo 146 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 1 Moore's Bluff (D.D.), 50 ft. out of NE cor. of M. Duncan.....Set 1 joint of 5-in. screen 3,580 ft.

Cranfill-Reynolds Co.'s No. 5 Davis (D.D.), Kokernut Sur., 150 ft. from S line, 1,197 ft. from E line of tract.....No report.

Cranfill & Reynolds' No. 5 Esperson (W.O.), M. Duncan Sur., 100 ft. N line and 300 ft. E line.....Shale 6,309 ft.

Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 500 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff.....Location.

Cranfill-Reynolds Co.'s No. 10 Moore's Bluff, M. Duncan Sur., 1,500 ft. from E line and 2,100 ft. from N line of 632-ac. tract.....Rig.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 16 Boyt, H.&T.C. Sur. No. 22, 675 ft. E of No. 6 and 685 ft. SE of No. 8.....Drlg. gumbo 2,912 ft.

HULL—LIBERTY COUNTY

Aberail Co., Inc.'s No. 1 fee, Jesse DeVore Sur., 700 ft. from E line and 64 ft. from N line.....Derrick.

Eclipse Oil Co., No. 2 Barrow, Jesse Devore Sur., 55 ft. W, 35 ft. S of most easterly NE cor. 3.7-ac. tract....Sand showing oil 5,416-28 ft.; cmtd. csg.

Eclipse Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse DeVore Sur., 30 ft. from N line and midway E and W of ½-acre tract.....Derrick.

Empire G. & F. Co.'s No. 24 Barngrover, Jesse DeVore Sur., 75 ft. out of SW cor. of lease.....Derrick.

Hannah Oil Co.'s No. 1 Hannah, Jesse DeVore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah.....Cmtd. 12-in. csg. 534 ft.; standing.

D. & L. Prod. Co.'s No. 3 Mecom & Layton, Jesse DeVore Sur., 80 ft. from S line, 60 ft. from W line of 3-ac. tr......Sand showing oil 4,350 ft; cmtd. 6⅝-in. csg. 4,275 ft.

Houston Prod. Co.'s No. 1 Baldwin, Jesse DeVore Sur., 222 ft. from S line and 50 ft. from E line of 5-acre tract.....Set 250 ft. of 4½-in. screen 4,701 ft.; flowed small amount oil, 500 lbs. pressure, ½-in. choke; killed well to pull D.S. and run tubing.

Republic Prod. Co.'s No. 91 Dolbear (D.D.), Jesse DeVore Sur......Sand 2,544-85 ft.; tested S.W.; pulled screen to deepen.

Republic Prod. Co.'s No. 129 Dolbear (W.O.), Jesse DeVore Sur......Set 1 joint of 4½-in. screen on full string 4½-in. liner 2,636 ft.

The Texas Company's No. 7 Hannah (W.O.), 200 ft. out of SW cor. tract in Jesse DeVore Sur......Coring sand and shale 4,829 ft.

MARKHAM—MATAGORDA COUNTY

Ryeade Oil Corp.'s No. 4 Meyers, 250 ft. from S line and 125 ft. from E line of SW, Blk. 1, William Hadden Sur......Washing down 3,088 ft.

PORT NECHES—ORANGE COUNTY

The Texas Company's No. 2 Polk-Kuhn-Glass, 350 ft. E and 100 ft. S of SW cor. of Marshall Beauchamp Sur......Spudded.

REFUGIO—REFUGIO COUNTY

Hewitt & Dougherty's No. 1 M. F. Lambert, Wm. Hews and L. Brown Sur., 4,350 ft. NE along NW line from SW cor. of United Prod. Corp.'s M. F. Lambert lease and thence 800 ft. SE at right angles.....No report.

E. M. Jones' No. 1-B Mitchell (D.D.), 250 ft. NW of SE line and 250 ft. SW of Mission River.....T.D. 9,134 ft.; plugged to 8,960 ft.; D.S. test 8,910-60 ft; showed brackish wtr.; standing.

Ed Jones' No. 2 Strauch, 650 ft. from S line and 200 ft. from E line of Lot 13, Sec. 12, Refugio town tr...S.D. 480 ft.

T. P. Morgan's No. 2 M. F. Lambert, 992 ft. from W line and 150 ft. from S line of lease in NE cor. of town tract.....No report.

CLAY CREEK—WASHINGTON COUNTY

Nicholson Oil Corp.'s No. 1 Bimage, C of E½ of J. F. Perry Sur., 200 ft. from W line and 1,300 ft. from S line of 242-ac. tract.....No report.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Reliable Oil Co.'s No. 3 Rawson & Haber, 1,800 ft. N and 400 ft. W of SE cor., Sec. 46-9s-2w.....Cmtd. 6-in. csg. 1,760 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 22 United Land Co., 5,760 ft. N and 1,360 ft. W of SE cor., Sec. 15-10s-4e.....Drlg. gumbo 1,250 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 2 Waite, 330 ft. out of NE cor. SE, Sec. 13-9s-7w.....Drlg. shale 6,085 ft.

Shell Pet. Corp.'s No. 2 Fontenot, 225 ft. E and 325 ft. N of SW cor. of Sec. 7-9s-6w.....Drlg. hard shale 4,697 ft.

EDGERLY—CALCASIEU PARISH

C. M. Crotty Oil Co.'s No. 7 Lillard (W.O.).....S.D. 2,824 ft.

Green Oil Co.'s No. 10 Moore (D.D.), 950 ft. S and 425 ft. E of NW cor. of Sec. 28-9s-11w.....Set 1 joint 4½-in. screen 2,921 ft; comp. flowing 30 bbls. fluid, 98% wtr.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 9 Bordages (W.O.), 310 ft. N and 90 ft. E of SW cor. of NW NE Sec. 8-10s-9w...T.D. 6,900 ft.; plugged to 6,664 ft.; tested S.W.; to plug back higher.

Union Sulphur Co.'s No. 3 Martha Moss, 300 ft. W, 150 ft. S, NE cor. NW SE, Sec. 8-10s-9w.....Set screen 5,365 ft.; tested S.W.; pulling screen to deepen.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 750 fee (D.D.), Sec. 29-9s-10w....Drlg. sand and shale 4,419 ft.

Union Sulphur Co.'s No. 769 fee, 296 ft. S, 918 ft. W of C of Sec. 29-9s-10w.....Salt 6,053 ft.; sidetracked 3,242 ft. to sand 4,886-96 ft.; tested S.W.; set whipstock 4,725 ft.; failed to sidetrack.

Union Sulphur Co.'s No. 770 fee, 292 ft. S, 1,343 ft. W of center, Sec. 29-9s-10w.....Location.

Union Sulphur Co.'s No. 772 fee, 146 ft. S, 882 ft. W of center, Sec. 29-9s-10w.....Drlg. gumbo 2,665 ft.

Union Sulphur Co.'s No. 774 fee, 226 ft. W, 114 ft. S of center of Sec. 28-9s-10w.....Drlg. rock 1,725 ft.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 6 Gray, Sec. 33-10s-12w, 160 ft. W of No. 3.....Tested S.W. 2,668 ft; pulling screen to deepen.

Marrs McLean's No. 14 Gray, Sec. 33-10s-12w, 88 ft. W and 30 ft. S of No. 4.....Drlg. hard sand 1,666 ft.

Vinton Pet. Co.'s No. 5 Matilda Gray (D.D.), 456 ft. W, 362 ft. N, SE cor. SW NE, Sec. 33-10s-12w.....T.D. 3,667 ft; to sidetrack.

BLACK BAYOU—CAMERON PARISH

Brownie-Babbette Oil Co.'s No. 1 Moore, 562 ft. W and 50 ft. S of NE cor. of E half SE of Sec. 18-12s-12w..Sandy shale showing oil 6,619-32 ft.; set 7-in. csg. 6,540 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 3 Unsurveyed Island, 1,120 ft. S and 225 ft. E of NW cor. of Sec. 24-12s-10w.....T.D. 3,035 ft.; abd.

Calcasieu Oil Co.'s No. 35 Watkins, 360 ft. NE of No. 33 in line with No. 20 in NW cor. Sec. 24-12s-10w.....Cap rock 2,749-55 ft; cmtd. 6⅝-in. csg. 2,750 ft.

Lackawanna Oil Co.'s No. 1 Ellender, 320 ft. S and 150 ft. E of NW cor. of SE SE of Sec. 21-12s-10w.....Derrick.

Moon Oil Co.'s No. 6 Sanner, 1,550 ft. N and 675 ft. E of SW cor. of Sec. 28-12s-10w.....T.D. 3,306 ft; set 12 ft. of 4½-in. screen; swabbing.

Pop Oil Co.'s No. 1 Ellender (W.O.), 617 ft. N, 931 ft. W, SE cor. NE, Sec. 19-12s-10w.....T.D. 2,430 ft. in salt; trying to sidetrack.

J. D. Sutton's No. 7 Irwin, 1,320 ft. N and 1,490 ft. W of SE cor. of Sec. 13-12s-10w.....Set 15 ft. of 3-in. screen in sand 3,014-15 ft; swbd. dry; standing.

Union Sulphur Co.'s No. 3 Gulf Land-Humble lease, 711 ft. N and 430 ft. W, SE cor., Sec. 11-12s-10w.....Drlg. gumbo 2,180 ft.

Union Sulphur Co.'s No. 1 Gulf land (Pure Oil Co. lease), 1,958 ft. N, 400 ft. W of SE cor., Sec. 11-12s-10w.....Sand showing oil 8,316-24 ft drill pipe stuck; sidetracking in sand 7,370 ft.

Yount Lee Oil Co.'s No. 11 School land, 2,610 ft. W and 1,608 ft. N, SE cor., Sec. 15-12s-10w.....Hard sand 4,500 ft.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co.'s No. 3 Myrtle Grove, Sec. 52-9s-11e, 400 ft. S and 50 ft. W of No. 1.....Spudded.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 6 Wilbert, Sec. 9-11s-12e, 200 ft. out from No. 5.....Cmtd. 13⅜-in. csg. 1,108 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Ref. Co.'s No. 2 Wilson & Cockran, Sec. 4-6s-5e, 600 ft. N of No. 1.....Set 2 joints 4½-in. screen 3,377 ft; comp. flowing 900 bbls. fluid, 20% wtr.; sanded.

Port Barre Oil Co.'s No. 1 Sibille (W.O.), Sec. 20-6s-5e, 600 ft. S and 124 ft. E, NW cor. of 30-ac. tr. ....Sand 3,466-94 ft; set 1 joint 3-in. screen.

The Texas Co.'s No. 12 Botney Bay, Sec. 4-6s-5e, N 7° 65 minutes E, 692 ft. from most southerly NE cor. of tr., thence N 82° 5 minutes W 474 ft.....Sandy shale 3,320 ft.

STARKS—CALCASIEU PARISH

Emerson & Moore's No. 1 Industrial, 385 ft. S and 275 ft. E of NW cor. of SW NE of Sec. 30-9s-12w.....Salt 2,785-3,325 ft; abd.

Emerson & Moore's No. 2 Industrial, 400 ft. S of No. 1, in SE cor. NE NW, Sec. 30-9s-12w.....Derrick.

Gulf Ref. Co.'s No. 31 Lutcher-Moore, Sec. 19-9s-12w, 500 ft. E of No. 15.....Rigging up.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-13s-8w, 800 ft. S 86 deg. 42 min. from No. 9.....Location.

LEESVILLE—LA FOURCHE PARISH

The Texas Co.'s No. 5 L.L.&E., 3,885 ft. S, 105 ft. E of NW cor. of Sec. 26-21s-32e.....Salt 4,107-4,080 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Great Southern Oil Co.'s No. 1 Schevojsa, 329 ft. N, 78° E of N cor. B. Dottery Sur......S.D. 2,783 ft.

BRAZORIA COUNTY

Danciger O. & R. Co.'s No. 1 W. C. Hunt, Pledger, 5,220 ft. from the N line and 6,500 ft. from E line of W. Coirson Sur......Reblds. derrick blown down in hurricane.

John Deering's No. 1 C. W. Chapman, 294 ft. from S line and 104 ft. from E line of Lot 2, Andrew Robinson Sur......Drlg. sandy shale 4,755 ft.

Shell Pet. Corp.'s No. 5 Blakely-Winston, Danbury, 1,410 ft. N 63° and 1,200 ft. N 27° W of SW cor. of H.T.&B. Sur. No. 14.....Cmtd. 13⅜-in. csg. 1,509 ft.

The Texas Company's No. 3 Belcher, Manvel, Harvey N. Little Sur., 1,220 ft. southwesterly and 200 ft. southeasterly out of N cor. of Belcher lease.....Sand showing oil 3,992-4,009 ft.; cmtd. 9⅝-in. csg. 3,983 ft; drld. plug and set screen.

Tri-fin Oil Co.'s No. 1 Moers, 1,635 ft. southwest of Chocolate Bayou and 693 ft. SE of NW line of F. Moore Sur......Location.

BURLESON COUNTY

Ball & Knob's No. 2 Polansky, M. B. Lawrence Sur., 350 ft. from E line and 469 ft. from N line of 158-ac. tr......No report.

E. M. Bracey et al's No. 1 Bracey, J. Lastly Sur., 850 ft. from E cor. of P. Taylor 110 acres, SE along NE line of J. G. Houston 160 acres, thence 180 ft. at right angles in 3-acre tract.....No report.

Marek & Son's No. 1 A. Marek, N. McFaddin Sur., 1,088 ft. N and 325 ft. W of SE cor. of tract ..... Standing 2,210 ft.
Sampson Oil & Gas Co.'s No. 2 Duckworth & Gilley, SE cor. of P. Singleton Sur., 700 ft. E of No. 1 ..... Drlg. 1,035 ft.
J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 81 ft. SW and 4,240 ft. SE of S cor. of Joseph Henson Sur. ..... Gumbo 600 ft.; standing.

COLORADO COUNTY

Bonte and Shell Pet. Corp.'s No. 1 Rudolph Matuska, Joshua Renneke Sur., 700 ft. S of most northerly NW cor. in C E and W of 130-acre tract ..... Cmtd. 10-in. csg. 291 ft; rebldg. derrick.
Smith, Adair et al's No. 1 Barnett, 230 ft. from W line and 330 ft. from S line of Blk. 26, Q. K. Winn Sur.... Black shale 4,345 ft.; standing.

FORT BEND COUNTY

Naylor & DeCosta's No. 1 Naylor, 4,350 ft. N, 55 deg. E from SW cor. 452-acre tract in Christman Sur. ..... T.D. 5,850 ft. (est.); sidetracked at 3,200 ft. and drlg. 5,363 ft.
North Star Pet. Co.'s No. 1 Guyler, Andrew Roberts Sur., 330 ft. out of SW cor. of 100-acre tract ..... Cmtd. 10-in. csg. 952 ft.
O'Kara et al's No. 1 Mayes, N. F. Roberts Sur., 300 ft. from N line and 500 ft. from E line of M. K. Mayes' 114 acres ..... Drlg. lime rock 148 ft.
Stone & Wyman's No. 1 Beard, H.&T.C. Sur. No. 118, 1,150 ft. from NW line, 1,892 ft. from NE line..... No report.

GALVESTON COUNTY

Humble Oil & Ref. Co.'s No. 1 Rosenkranz, Green's Bayou, center N half of Lot 10, Sarah White Sur..... Rig.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur. ..... Shut down 2,670 ft.
W. J. Brightwell's No. 1 Combs, Samuel Beauman Sur., 350 ft. from S line and 622 ft. E of extreme W line of 276-acre tract ..... Rig.

HARDIN COUNTY

W. R. Alexander et al's No. 1 Southwestern Lbr. Co., 150 varas W of C of E line of Mary K. Sherman Sur.. Drlg. shale 3,326 ft.
Gulf Prod. Co.'s No. 1 Kirby, Ariola, 330 ft. out of SE cor. of 100-ac. tract, Ariola Sur. ..... Derrick.
Houston Oil Co. and Republic Prod. Co.'s No. 1 Ariola fee, 3,660 ft. from N line and 9,700 ft. from E line of Ariola Sur. ..... Coring sand and shale 4,006 ft.
Houston Oil Co.'s No. 1-X Ariola fee, 3,000 ft. from N line and 5,610 ft. from W line of Ariola Sur. ..... Cmtd. 12½-in. csg. 881 ft.
Houston Oil Co.'s No. 1-Y Ariola fee, 3,000 ft. from W line and 5,610 ft. from N line of Ariola Sur. ..... Derrick.
Houston Oil Co.'s No. 1-Z Ariola fee, 5,610 ft. from W line and 5,610 ft. from N line of Ariola Sur. ..... Location.
Joe E. Proctor's No. 1 Russell & Teagle, 3,650 ft. E and 2,777 ft. N of NW cor. of Wm. W. Young Sur..... S.D. for fuel 2,410 ft.

HARRIS COUNTY

Bayou Oil Co.'s No. 1 Hall, 350 ft. from N line and 970 ft. from E line of Wm. Hodge Sur. ..... Drlg. gumbo and lime 2,576 ft.
T. V. Buckholve & Sons' No. 1 Miller, Arthur McCormick Sur. ..... D.S. stuck 977 ft.
John Deering's No. 1 Warren, Hockley T. Snell Sur., 100 ft. due south of The Texas Co.'s No. 3 Warren.. S.D. 2,411 ft.
H. D. Morse et al's No. 1 Schiveinle, Wm. White Sur., 900 ft. S 80° W of NW cor. of Lienberger 20-ac. tract in Blk. 1 ..... Shut down 3,612 ft.
Victor Smith's No. 1 Dr. Griffith, S. Bell Sur., 582 ft. from E line and 60 ft. from N line of 250-acre tract.. Standing 225 ft.

JASPER COUNTY

West Drlg. Co.'s No. 1 Flourney, B. F. Jones Sur., 900 ft. NW of Helmerich & Payne's No. 1 Flourney .... Shut down 4,521 ft.
P. Michael et al's No. 1 Eck, G.C.&S.F. Sur., 502 ft. from N line and 497 ft from E line of tr. ..... Cmtd. 10-in. surface pipe 100 ft.

JEFFERSON COUNTY

Coastal Oil & Gas Co.'s No. 1 Young, Joseph Grigsby Sur., 250 ft. from E line and 160 ft. from S line of 40-acre tract in Block F-5, Lot 6 ..... Drlg. shale 1,556 ft.
Klam & Pipkin's No. 2 Broussard, John McGaffey Sur., 150 ft. due E of No. 1 ..... Shut down 1,855 ft.
Jack Schultz' No. 2 Todd, Cheek, 1,800 ft. S of No. 1 and 130 ft. E of W line of Wm. Carr Sur. ..... Cmtd. 12½-in. csg. 860 ft.

LIBERTY COUNTY

Leon Brisley's No. 1 J. M. Neal, Edward Tanner Sur., 1,800 ft. E, 1,300 ft. N of most westerly NW cor. of Margaret Evans Sur. ..... S.D. 2,060 ft.
Mayes et al's No. 1 Dunman, J. C. Martin Sur., 1,111 ft. from S line of survey and 2,360 ft. W of Trinity River ..... Spudded.

MATAGORDA COUNTY

Danciger O. & R. Co.'s No. 1 Turner, 4,900 ft. from NE line and 3,800 ft. from SE line of M. Cummings Sur. ..... Rebldg. derrick blown down in hurricane.
Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 3,000 ft. E from SW cor. of Seth Ingram Sur. ..... T.D. 2,720 ft.; cmtd. string of combination 6 and 4-in. csg. 2,700 ft.; drld. plug and tested S.W. to reset; standing.
Shepherd's Mott Salt Dome Oil Co.'s No. 1 Hawkins, Shepherd's Mott, 5,268 ft. from N line and 1,320 ft. from E line of B. McCarthy Sur. ..... Drlg. sandy shale 5,222 ft.
United North & South Oil Co.'s No. 1 Stoddard, J. C. Keller Sur., 150 ft. W and 545 ft. N of SE cor. Blk. 53, Buckeye Townsite ..... T.D. 7,950 ft; plugged to 7,926 ft.

MONTGOMERY COUNTY

Alpha Oil Co.'s No. 1 Dunn, C of N 20 ac. of S 50 ac., W. N. Real Sur. ..... Drlg. shale 4,513 ft.
Craft & Gesicke's No. 1 South Tex. Dev. Co., T.&N.O. Sur., Blk. 9 ..... Coring shale 5,348 ft.
Craft & Gesicke's No. 1 Keystone Mills, 300 ft. out of NE cor. of A. S. James (T.&N.O. No. 4) Sur. ..... S.D. for fuel 2,110 ft.
Gulf Coast Drlg & Prod. Co.'s No. 1-B South Texas Dev. Co., 466 ft. out of NE cor. 40-acre lease on dividing line of Theo. Slade and lower Alex McCown Sur. ... Cmtd. 10-in. csg. 1,402 ft.
Hamilton et al's No. 1 Gilbert, John Davis Sur., 256 ft. from W line and 465 ft. from S line of 46-acre tract.. Set 29 ft. 10 inches of 5 3/16-in. csg. 5,125 ft; comp. flowing 700 bbls. in 17 hrs.; 110 lbs., 5/16-in. choke.
Hooper Oil Co.'s No. 1 W. M. Hooper, 466 ft. from N line in center east and west of L&G.N. Sur. A-649... Derrick.
Houston Oil Co. and Heep Oil Co.'s No. 1 Dobbins, Ransom House Sur., 466 ft. east of W line in center north and south of 100-ac. tract ..... Derrick.
Houston Oil Co. and Heep Oil Co.'s No. 1 W. N. Hooper, Jr., 450 ft. from N line in center of east and west of L&G.N. Sur. A-650 ..... Derrick.
Humble Oil & Ref. Co.'s No. 1 C. L. Dobbins, Ransom House Sur., 425 ft. from N line and 466 ft. from W line of tract ..... Sand and shale showing oil 5,113 ft.
Humble Oil & Ref. Co.'s No. 4 South Tex. Dev. Co., 1,900 ft. N from SE cor. of T. C. Rowell Sur., thence 466 ft. W at right angles ..... Drlg. sand 5,187 ft.
Humble Oil & Ref. Co.'s No. 5 South Texas Dev. Co., Theo. Slade Sur., 330 ft. S of S line of Gulf Coast Drlg. & Prod. Co.'s 60 ac. and due S offset latter's No. 1 ..... Drlg. shale 1,437 ft.
Humble Oil & Ref. Co.'s No. 6 South Texas Dev. Co., Theo. Slade Sur., 335 ft. from S line of survey and due N offset Heep Oil Corp.'s No. 1 Hamman ..... Drlg. shale and lime 1,423 ft.
Humble Oil & Ref. Co.'s No. 7 South Texas Dev. Co., Theo. Slade Sur., 331 ft. S of S line of Martin & Dewey 30-ac. tract and 330 ft. W of SE cor. ..... Drlg. hard sand 1,037 ft.
Humble Oil & Ref. Co.'s No. 8 South Texas Dev. Co., Theo. Slade Sur., 330 ft. E of E line and 331 ft. N of S line of Martin & Dewey 30 ac. ..... Drlg. shale 1,850 ft.
Humble Oil & Ref. Co.'s No. 9 South Texas Dev. Co., Theo. Slade Sur., 330 ft. E and 328 ft. N of SE cor. Gulf Coast Drlg. & Prod. Co.'s 60 ac. ..... Derrick.
Humble O. & R. Co.'s No. 1 South Texas Dev. Co., 1,125 ft. from S line and 660 ft. from E line of Sur... Drlg. surface formation 100 ft.
Humble Oil & Ref. Co.'s No. 1 Cartwright, John Davis Sur., 330 ft. from N line, 466 ft. from E line of 248.9-ac. tract ..... Drlg. shale and sand 5,058 ft.
Humble Oil & Ref. Co.'s No. 2 Cartwright, John Davis Sur., 454 ft. from S line and 928 ft. from E line out of SE cor. of tract ..... Rig.
Humble O. & R. Co.'s No. 3 Cartwright, John Davis Sur., 289 ft. from N line and 395 ft. from W line of Freeman 36 acres ..... Derrick.
Humble O. & R. Co.'s No. 4 Cartwright, John Davis Sur., 660 ft. out of NW cor. of tract ..... Derrick.
Humble O. & R. Co.'s No. 1 Plaeffiin, N. W. Real Sur., 626 ft. E and 343 ft. N of SW cor. of tract ..... Rig.
Lilly and Red Moon Oil Co.'s No. 1 Stella McDonald, John Davis Sur., 241½ ft. from E line, 202.5 ft. from S line of 5-ac. tract ..... S.D. 800 ft.
Lowrie & Young's No. 1 C. A. Damuth, approx. 5,430 ft. from E line and 3,018 ft. from S line of T. J. Nichols Sur. ..... Drlg. sandy shale 4,037 ft.
Miller Prod. Co.'s No. 1 Foster Lbr. Co., M. B. Lawrence Sur., 2,640 ft. from N line and 300 ft. from E line of 412-acre tract ..... Cmtd. 10-in. csg. 465 ft.
Moore et al's No. 1 Bruton, L&G.N. Sur., 466 ft. out of NE cor. 46-acre tract ..... Set 59¾ ft. of 5-in. screen 5,050 ft.; comp. flowing at rate of 3,000 bbls. daily, ¾-in. choke, 1,500 lbs. pressure.
Pevehouse Oil Co.'s No. 1 Sealey, Jas. Pevehouse Sur., 1,575 ft. N of N line of Horton & Woodson's 1,562-acre tract and 3,226 ft. E of W line of H.&W. 1,870-acre tract ..... Shut down 3,984 ft.
Rowe & Flowers' No. 1 Varner, R. House Sur., 330 ft. out of NE cor. of 33-ac. tr. ..... Standing 5,255 ft.
Rowe & Flowers' No. 1 Alexander, 330 ft. out of SE cor. Lot 20 in the NW A. McCown Sur. ..... T.D. 5,254 ft.; plugged to 5,100 ft.; setting screen.
Strake Oil Corp.'s No. 3 South Tex. Dev. Co., 2,475 ft. from W line and 790 ft. from S line of Theo. Slade Sur. ..... Coring sand and shale 5,986 ft.
Sutton-Hawkins' No. 1 Foster, Rosea de la Garza Sur., 3,333 ft. N and 1,320 ft. E of NE cor. of W. J. Johnson 100-ac. tract ..... Spudded.
The Texas Company's No. 1 Moody, 1,400 ft. easterly and 466 ft. southerly out of NW cor. of Moody 494-acre lease, Ranson House Sur. ..... Rig.
R. H. Vice's No. 1 S. L. Ross, Jose Maria De La Garza Sur., 1,777 ft. N and 344 ft. E of SW cor. 97-acre tract ..... Shale 4,134 ft; recmtng. 10-in. csg. 330 ft.

NEWTON COUNTY

L. A. James et al's No. 1 Price, T.&N.O. Sur., 1,000 ft. from W line and 500 ft. from N line of tract ..... Shut down 1,205 ft.
Sun Oil Co.'s No. 1 Peevey Moore Lbr. Co., 2,145 ft. from S line and 1,225 ft. from W line of F. Stoevar Sur. No. 4 ..... Drlg. shale and lime 3,776 ft.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Reed, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... Set 10-ft. blank and 15 ft. of 4½-in. screen 4,803 ft.; tested salt water; shut down.

POLK COUNTY

Anderson et al's No. 1 Duke, Peter J. Manard Sur., 330 ft. out of NW cor. of 235-acre tract ..... Cmtd. 15-in. csg. 40 ft.
Coch & Stevens' No. 1 Ruth Lawrence, Castillian Sur., 300 ft. from W line and 790 ft. from S line of 54-acre tract ..... S.D. 1,169 ft.
W. H. Freeman's No. 2 Freeman, A. Viesca Sur. ..... Standing 3,374 ft.
Dick Schwabb's No. 1 Carlton Davis, A. Viesca Sur., 350 ft. out of most northerly SE cor. A. E. Munson 101-acre tract ..... Location.
Tony & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... Spudded and shut down.
G. A. Williams et al's No. 1 Carlton-Davis, 300 ft. E and N out of SW cor. of L&G.N. Sur. No. 52 in 55-ac. tr. ..... Derrick.

REFUGIO COUNTY

Gulf Prod. Co.'s No. 1 J. O'Connor, C.E.P.I.&M. Sur., 1,200 ft. from S line and 1,500 varas from E line of tract ..... No report.
Humble Oil & Ref. Co.'s No. 1 O'Connor (D.D.), 6,012 ft. S from NE cor. along SE line of Lon T. Rios Sur., thence 7,375 ft. W at right angles in John Keating Sur. ..... Shut down 5,972 ft.
Humble Oil & Ref. Co.'s No. 2 O'Connor, John Keating Sur., 12,625 ft. N of S line at right angles and 8,158 ft. W of E line at right angles ..... T.D. 5,748 ft.; milling out of 13⅜-in. csg. 2,216 ft.

SAN JACINTO COUNTY

Joe L. Pace's No. 1 Foster Estate, H.&T.C. Sur. No. 3, 2,640 ft. from E line and 1,940 ft. from S line survey.. Rig.

TRINITY COUNTY

C. N. Beckner's No. 1 Mangum, J. A. Henderson Sur., 200 ft. out of NE cor. 80-acre tract ..... Shut down 1,374 ft.
Joseph M. Weaver's No. 1 Thompson, 150 ft. out of NE cor. of I.&G.N. Sur., No. 47 ..... S.D. 3,556 ft.

TYLER COUNTY

Allied Pet. Co.'s No. 3 Wilson, 1,500 varas from W line and 600 varas from N line of Mrs. E. Cheny Sur., Abst. 798 ..... T.D. 5,146 ft.; trying to pull 3-in. drill pipe.
Republic Prod. Co. and Houston Oil Co.'s No. 1 fee, 3,384 ft. from W line and 484 ft. from N line of Adolph Sterne Sur. ..... Cmtd. 12½-in. csg. 507 ft.
Houston Oil Co.'s No. 1-A McFaddin, 200 ft. from NE line, 240 ft. from SE line of I.R.R. Sur. No. 30 ..... T.D. 5,392 ft.; plugged to 1,673 ft.; drlg. sidetracked hole 4,826 ft.
Humble Oil & Ref. Co.'s No. 1 Pete Rydolph, John Kemper Sur., 2,617 ft. from E line and 1,013 ft. from W line of lease ..... Drlg. sandy shale 4,903 ft.
The Texas Company's No. 3 McFaddin (W.O.), S 15° W 6,200 ft., N 75° W 1,850 ft. from NE cor. John M. Rine Sur. ..... Drlg. shale 5,867 ft.
Union Oil Co.'s No. 1 Keeran, 4,166 ft. SW along SE line of Gulf Prod. Co.'s 2,500-ac. lease from most easterly cor., thence 1,320 ft. SE at right angles in Martin DeLeon Sur. ..... No report.

WALKER COUNTY

W. E. Brown's No. 1 Horshall, 150 ft. out of SE cor. of E. Miller Sur. ..... Shut down 2,710 ft.
Hart Oil Co.'s No. 1 Thompson Lbr. Co., Jose Ortega Sur., 1,265 ft. S, 1,876 ft. W of SW cor. of J. B. Gibson's 71-acre tract ..... Shut down 2,090 ft.

WALLER COUNTY

McDaniel and associates' No. 1 Citizens State Bank, B.B.B.&C. Sur., C of 150-acre tract ..... No report.
Seven Wells Oil Corp.'s No. 1 Maxwell, Justo Liendo Sur., 225 ft. from N line and 492 ft. from W line of 86-acre tract ..... Drlg. shale 3,305 ft.

WASHINGTON COUNTY

M.O.&T. Corp.'s No. 1 Giddings, S. Young Sur., 200 ft. from S line and 150 ft. from W line of 698-acre tract ..... Shut down 65 ft.

WHARTON COUNTY

Gantt et al's No. 1 Laura Hahn, N. Manch Sur., 330 ft. out of NE cor. 142.17-ac. tract ..... Spudded.

SOUTH LOUISIANA

ASCENSION PARISH

Rio Bravo Oil Co.'s No. 1 Community Lease, Darrow, 200 ft. from N line and 1,500 ft. E at right angles from SW cor. of Sec. 15-10s-2e ..... Drlg. hard shale 2,715 ft.

BEAUREGARD PARISH

DeRidder Dev. Co.'s No. 1 McMahon, 200 ft. W and 156 ft. S of NE cor. of NW of Sec. 33-3s-9w ..... Gumbo 1,286 ft.

CALCASIEU PARISH

Cannon & Hughes' No. 1 J. S. Reed, Sec. 18-10s-12w ... Derrick.
I. R. Irvine et al's No. 1 A. D. Mimms, 741 ft. N and 741 ft. W of SE cor. SE NE, Sec. 20-9s-7w ..... Gumbo 500 ft.

EVANGELINE PARISH

Emile LeDeau's No. 1 Vidrine, 240 ft. W and 350 ft. S of NE cor. of Sec. 47-3s-3e ..... Shut down 1,430 ft.

IBERIA PARISH

Warrick Oil Co.'s No. 1 Bernard, 913 ft. N and 150 ft. E of SW cor. of Sec. 54-12s-7e ..... Standing 2,137 ft.

JEFFERSON DAVIS PARISH

Little City Oil Co.'s No. 1 Jennings Norwood, 1,975 ft. N and 675 ft. E of SW cor. of Sec. 44-9s-3w ..... Drlg. 3,825 ft.

PLAQUEMINES PARISH

Lake Washington-Freeport Sulphur Co.'s No. 2 Cockrell-Moran, Sec. 14-20-26e, 1,218 ft. N and 4,396 ft. E of station ..... Sulphur test.
Lake Washington-Freeport Sulphur Co.'s No. 3 Cockrell-Moran, 5,100 ft. E and 1,000 ft. S of Washington Station, Sec. 14-20s-26e ..... Sulphur test.
Lake Washington-Freeport Sulphur Co.'s No. 4 Cockrell-Moran, 3,100 ft. S and 2,950 ft. E of Washington Station, Sec. 14-20s-26e ..... Sulphur test.
Lake Washington-Freeport Sulphur Co.'s No. 5 Cockrell-Moran, 5,200 ft. E and 850 ft. N of Washington Station, Sec. 14-20s ..... Sulphur test.
Lake Washington-Freeport Sulphur Co.'s No. 1 Louisiana State, 598 ft. N and 1,329 ft. E of station ..... Sulphur test.
The Texas Co.'s No. 5 Garden Island Bay, 2,180 ft. W and 1,750 ft. S, NE cor., Sec. 107-22s-32e ..... Location.

TERREBONNE PARISH

The Texas Company's No. 7 State-Lake Pelto, 2,316 ft. N, 164 ft. W of SE cor., Sec. 2-23s-13e ..... Derrick.
The Texas Co.'s No. 16 State-Lake Barre, 1,500 ft. S, 150 ft. E of NW cor., Sec. 20-21s-19e ..... Drlg. shale 3,612 ft.
The Texas Company's No. 17 State-Lake Barre, 1,476 ft. W and 626 ft. S of NW cor. of Sec. 29-21s-20e ..... Capping piling.
The Texas Company's No. 3 Lake Barre-L.L.&E., 3,520 ft. S and 110 ft. E of NW cor. of Sec. 30-21s-20e .... Drlg. sand and shale 3,706 ft.

VERMILLION PARISH

Pure Oil Co.'s No. 1 Mulvey Irrigation (Gueydan), 1,170.9 ft. from N line and 2,352.5 ft. from W line of Sec. 34-11s-1w ..... Set 1 joint of 7-in. screen 4,004 ft; comp. flowing 27 bbls. hourly, 1,180 lbs. pressure, ¾-in. choke.

VERNON PARISH

Minerals Division Ilano Co.'s No. 1 Llano Del Rio, 542 ft. E and 300 ft. S of NW cor. of NW of Sec. 34-3n-9w ..... Drlg. 1,450 ft.

WEST FELICIANA PARISH

Putnam Synd.'s No. 3 Como Plantation, Sec. 61-1s-14w ..... Shut down 2,449 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 52)

Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur. ..... T.D. 2,495 ft.; in Edwards dry.
Jones & Voltz' No. 1 Bonkowsky, 150 ft. to N and W lines of William McMenenes Sur., 12 miles E of San Antonio ..... T.D. 907 ft.; standing.
Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio ..... T.D. 1,330 ft.; S.D.
C. J. Webster Oil & Gas Co.'s No. 1 San Antonio Suburban Irrigated Farms, 200 ft. from S and W lines of Farm Lot 2, Blk. 49, in SW Bexar County ..... T.D. 960 ft.; drlg.

BROOKS COUNTY

M. P. Evans' No. 1 J. M. Martinez, 200 ft. from N and W lines of Blk. 11, Sec. 6, La Encantada Sur. ..... T.D. 1,430 ft.; standing.

CALDWELL COUNTY

Cargill et al's No. 1 Dameron, 150 ft. from N and W lines of 72-5-ac. tract in Dillard Cooper Sur. ..... Derrick.
E. D. Herne's No. 1 M. C. and P. W. Jeffrey 136-ac. tract, 150 ft. from N and E lines of tract in James George Sur. ..... Set surface pipe, waiting for wtr.

DIMMITT COUNTY

Motes-Campbell Co.'s No. 1 Denton, 150 ft. from E line, 250 ft. from S line of Tracts 33 and 34 in Sec. 60 of Denton Colony Subd. ..... T.D. 400 ft.; waiting for csg.

DUVAL COUNTY

J. E. Anderson's No. 1 Wood-Welder, 1,400 ft. from E line, 400 ft. from N line of Sur. No. 73 ..... Rigging up.
Buchanan & Frates' No. 1 Hagist, cen. of SW Sur. 267 ... T.D. 2,505 ft.; abnd.
Clark & Cowden's No. 1 J. M. Richardson, 3,265 ft. from S line, 300 ft. from E line of Sur. No. 5 ..... T.D. 1,763 ft.; comp. 10,000,000 ft. gas.
Delange & Frates' No. 1 Sevier, 1,845 ft. from N line, 2,945 ft. from W line of Sur. 213 ..... T.D. 375 ft.; drlg.
Frank Gravis' No. 3 Schallert in Sur. 255 (Palangana salt dome) ..... T.D. 1,100 ft.; standing.
O. W. Killam's No. 1 Peters, 150 ft. from E line, 450 ft. from N line of SE of Sur. No. 1 ..... T.D. 2,725 ft.; standing.
J. A. Leindecker's No. 1 G. W. Sutherland, 560 ft. from S line, 450 ft. from W line of Survey No. 182 ..... Rigging up.
Payne & Vernon's No. 1 A. Roach, 885 ft. from E line, 45 ft. from S line of Blk. 7, Sur. No. 457 ..... Rigged up.
C. L. Smith's No. 1 Sutherland, 150 ft. from S and W lines of Sur. 156, 4 miles SW of Sarnosa Pool. ..... Location.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Halff & Oppenheimer, 1,200 ft. from N line, 200 ft. from E line of W. F. Halsel Sur. ..... Rigged up.

GUADALUPE COUNTY

B. E. Brock's No. 1 Ogletree, 1,600 ft. from W line, 450 ft. from S line of tract in Robert Smith Sur. ..... T.D. 1,785 ft.; drlg.

GOLIAD COUNTY

Heffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,470 ft.; standing.
Owen & Gunby's No. 1 C. F. Appling, 1,303 ft. from NE line and 150 ft. from NW line of Shell 50-ac. lease in Samuel Highsmith Sur. ..... Location.
Plymouth Oil Co.'s No. 2 Parks, 400 ft. S of No. 1 Parks in Solomon Parks Sur. ..... T.D. 5,400 ft.; drlg.
Rowan & Hope and Phillips Pet. Co.'s No. 1 Irby, 4,500 ft. from E line, 2,000 ft. from N line of 2,080-ac. tract in Ybarbo Sur. ..... Spudded in and set surface csg.

GONZALES COUNTY

Luling Oil & Gas Co.'s No. 1 J. L. Dubose, 870 ft. from S line, 450 ft. from E line of 100-ac. tract in F. R. Whitner Sur. ..... Location.
Luling Oil & Gas Co.'s No. 1 J. L. Dubose, 870 ft. from S line, 450 ft. from E line of 100-ac. tract out of 295-ac. tract in F. R. Whitner Sur. ..... T.D. 500 ft.; drlg.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,590 ft.; S.D.
San Roman Oil Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 675 ft.; S.D.
Dayle L. Smith's No. 3 Daskam, SW part of county ..... T.D. 1,726 ft.; S.D

JIM HOGG COUNTY

Clark & Cowden's No. 1 E. Vela, Share 1 El Peyote grant. Rigging up.
D. C. DeWitt's No. 1 Gomez, 1,110 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county ... T.D. 1,457 ft.; to drill deeper.
Jack Tarver's No. 1 Martinez, 300 ft. from E line, 1,600 ft. from N line of Sur. No. 623 ..... Location.

JIM WELLS COUNTY

Catlett & O'Neal's No. 2 H. D. Miller, 2,200 ft. N and 83 deg. E of most southwesterly cor. of ranch ..... T.D. 3,080 ft.; drlg.
B. A. Lain's No. 1 Vernon Porter, 800 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... Derrick rebuilt, resumed drlg.
Mid-States Oil & Gas Co.'s No. 1 Wade, C Blk. 3, Wade ranch, NE part of county ..... Location.

KARNES COUNTY

A. E. Edmiston's No. 1 O. L. Cochran, 150 ft. from S line, 500 ft. from E line of farm in D. B. McConnell Sur. ..... T.D. 2 014 ft.; drlg.
Ike Howeth et al's No. 1 D. Pargmann in Victor Blanco Sur., 660 ft. NE along county road from NE cor. of F. Heer tract, thence 50 ft. NW at right angles .. T.D. 4,312 ft.; drlg.

KERR COUNTY

Eastland Oil Co.'s No. 1 Love, 600 ft. E of No. 1 Love in J. Martinez Sur. No. 1,594 ..... T.D. 2,656 ft.; shutting out water.
Evans & Gant's No. 1 E. Young, A. E. Burg Sur. 38 .... T.D. 1,312 ft.; standing.
Verde O. & G. Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,923, Hamilton Sur., 4 miles from Center Point; T.D. 200 ft.; carried to this depth and abandoned as Herber Oil Co.'s No. 1 J. D. Witt ..... T.D. 110 ft.; standing.

KLEBERG COUNTY

H. Carter's No. 1 R. H. Simmons, 150 ft. from S and W lines of tract in Sec. 7, King Sur. No. 3 ..... T.D. 3,305 ft.; resuming drlg.
Harris et al's No. 1 Dennett, north of Kingsville Field .. Moving in rig.

LIVE OAK COUNTY

J. H. Durbin's No. 1 Marbach, 1,900 ft. from W line, 425 ft. from SE line of tract in S. Hayes Sur. ..... Derrick.
J. A. Harper's No. 1 fee, 2,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 ..... T.D. 592 ft.; resumed drlg.

LEE COUNTY

Paton Bros.' No. 1-A Turner, 24 ft. from No. 1 Turner ... T.D. 5,674 ft.; fishing.

McMULLEN COUNTY

Andy Lacey et al's No. 1 Hagist, 330 ft. from N and W lines of R. W. Mills Sur. No. 467 ..... Spudded in.

MEDINA COUNTY

James Earle Greenlee's No. 1 J. P. Nixon, 150 ft. S of C of N line of S half of NW of M. Derungs Sur. No. 528 ..... Spudded in.
Robertson Drilling Co.'s No. 1 Little, 2,350 ft. from N line, 1,500 ft. from E line of E. B. Rutledge Sur., southern part of county ..... T.D. 2,682 ft.; drlg.

MILAM COUNTY

Bridwell's No. 1 Terry, 1,100 ft. from N line, 800 ft. from W line of tract in Jose Leal Sur. ..... Derrick.
M. W. Eiser's No. 1 Citizen's Nat. Bank of Waco, 1,325 ft. from S line, 625 ft. from E and W lines of tract in Wm. Punchard Sur. ..... T.D. 1,570 ft.; drlg.
Glass et al's No. 1 Ellison, 700 ft. from N line, 1,350 ft. from W line of 200-acre tract in Samuel Frost Sur. .. T.D. 1,500 ft.; drlg.
Keyser & Nichols' No. 2 Irwin, 65 ft. from No. 1, Levi Taylor Sur. ..... T.D. 1,575 ft.; abnd.
Keyser & Roberts' No. 3 Ward, 125 ft. NE of No. 2 Ward, in Levi Taylor Sur. ..... T.D. 1,315 ft.; S.D.
Michalk & Clark's No. 1 Johnson, 60 ft. S of No. 1 Johnson on 100-ac. lease in Juan Jose Acosta Sur. .. T.D. 2,137 ft.; drlg.

SAN PATRICIO COUNTY

John F. Camp's No. 1 W. W. Bennett, C SW of Sec. 8, Geo. H. Paul Subd., J. J. Welder ranch ..... T.D. 4,750 ft.; plugged back to 4,590 ft. and set csg.; tested small amt. gas; abnd.

STARR COUNTY

Coastal O. & G. Co.'s No. 1 Kelsey Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86 .. T.D. 989 ft.; standing.
Frank Dawson's No. 2 R. E. Margo, 200 ft. from S line, 603 ft. from E line of Blk. 6, Porcion 70, Jurisdiction of Mier ..... Spudded in.
L. W. Connor's No. 1 Sanches, cen. of Sur. 344 ..... Rigging up.
W. T. Gilman & Travelers Oil Co.'s No. 1 C. Ramos, 1,170 ft. from SW line, 1,470 ft. from NW lines of Sur. No. 150 ..... Spudded in and S.D.
Hardin et al's No. 1 V. G. de Guerra, 2,994 ft. from NE line, 150 ft. from NW line of 1,000-ac. tract in Porcion 56 ..... Rigging up.
H. C. Harter's No. 1 Gonzales, 990 ft. from N line, 1,150 ft. from E line of Share 62-B of Subd. of Porciones 70 and 71, Jurisdiction Mier ..... T.D. 410 ft.; standing.
Jeffries and Lambeth Drilling Co.'s No. 1 Starr County Cattle Co., 11,572 ft. from N line, 2,490 ft. from E line of Porcion 89, Jurisdiction of Camargo ..... Rigging up.
Lackawanna Oil Corp.'s No. 1 V. Guerra, 657 ft. from NE line, 763 ft. from SE line of Blk. 12, Subd. of 2,000-acre tract out of Porciones 55 and 56 ..... Location.
Matthew & Chitty's No. 1 R. E. Monroe, 400 ft. from E line, 250 ft. from S line of tract in Share 3-B, Porcion 70 ..... T.D. 175 ft.; drlg.
Morrison et al's No. 1 V. G. Guerra, 1,980 ft. from SW line, 450 ft. from SE line of Sur. No. 23 ..... T.D. 369 ft.; set csg.
John Pope, trustee's No. 2 H. Gonzales, 150 ft. W of cen. of E line of Sur. No. 339 ..... Location.
Raddig, Davis & Bowers' No. 1 M. Guerra in Porcion 110 ..... T.D. 275 ft.; standing.
Smith et al's No. 1 Lopez, 200 ft. from E line, 1,000 ft. from S line of Blk. 20, Share 65 of Porcion 89, Jurisdiction Camargo ..... T.D. 575 ft.; drlg.
George Stobaugh's No. 1 Seabury et al, 150 ft. from S and W lines of Porcion 107 ..... T.D. 278 ft.; drlg.
Stryalls Oil Corp.'s No. 1 H. Garza, 500 ft. from E line, 5,280 ft. from N line of Share 26, Partition of Porciones 67-72 ..... T.D. 390 ft.; standing.
E. L. Williams' No. 1 L. G. Madrigal, 150 ft. from N and W lines of Share 5-A of Porcion 72 of Jurisdiction of Mier ..... T.D. 332 ft.; drlg.

TRAVIS COUNTY

Fritz Fuchs' No. 1 Swedish, 2,350 ft. from NE line, 750 ft. from NW line of Thomas Smith Sur. ..... T.D. 1,598 ft.; S.D.
Ray & Orth's No. 1 Lundgren, 550 ft. from N line, 150 ft. from W line of 133-ac. tract in L. Kimbro Sur. .. T.D. 550 ft.; fishing.

WEBB COUNTY

Blair & Livingston's No. 1 J. M. Garcia, 150 ft. from N and E lines of NE NW of Sur. 1,100 ..... Location.
O. W. Killam's No. 2 Hogterp, 590 ft. from NE line, 265 ft. from SE line of Blk. 6, Sur. 1,110 ..... T.D. 1,505 ft.; set csg.
O. W. Killam's No. 4 Hoogterp, 490 ft. from S line, 935 ft. from E line of Blk. 12, Sur. 1,110 ..... Spudded in.
Newton Drilling Co.'s No. 1 A. Garcia, 2,550 ft. from S line, 2,340 ft. from W line of Sur. No. 52, 2 miles SW of Carolina Texas Field ..... T.D. 1,208 ft.; tested gas.
Norden & Morris' No. 2 Gates, 240 ft. from W line, 400 ft. from S line of Blk. 5, Sur. No. 19 ..... T.D. 2,010 ft.; abnd.
Norden & Morris' No. 3 Gates, 2,500 ft. from E line, 3,400 ft. from S line of Survey No. 116 ..... Spudded in.
Thompkins et al's No. 1 Ortiz, 200 ft. from E line, 2,000 ft. from N line of Sur. No. 1,808 ..... T.D. 936 ft.; standing.

WILLIAMSON COUNTY

Burns et al's No. 1 E. G. Edge, 360 ft. from SE line, 267 ft. from SW line of 94-acre tract on Simon Miller Sur. ..... T.D. 2,300 ft.; drlg.

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract in B. Manlove Sur. ..... T.D. 740 ft.; S.D.

McNeil & Orth's No. 1 Joe Littleton, 800 ft. from W line, 150 ft. from N line of H. Good Sur. ..... Location.

M. L. Vaughn's No. 1 Merrell, 300 ft. from S line, 500 ft. from E line of tract in G. W. Glasscock Sur. ..... Location.

WILSON COUNTY

A. M. Blume's No. 1-A Nicholson, 105 ft. N, 27 deg. E of No. 1 Johnson ..... T.D. 890 ft.; set csg.

ZAPATA COUNTY

Ballard & Mercer's No. 1 Flores, 500 ft. from NE line, 580 ft. from SE line of Blk. 27, Porcion 37 ..... T.D. 2,505 ft.; standing.

Joe Cullinan's No. 1 E. Gutierrez, 1,992 ft. from NE line, 2,303 ft. from SE line of Charco de la India grant ..... T.D. 1,725 ft.; drlg.

Donohoo et al's No. 1-A Garcia, 150 ft. from NE and SE lines of Blk. 7 of Subd. of 700-ac. of Share A. Charco Redondo grant ..... T.D. 742 ft.; drlg.

Huff & Fudge's No. 1 Uribe, 150 ft. from NW and SW lines of Blk. 8, Share 7, Partition 6, San Ignacio Subd. of Borrego grant ..... T.D. 300 ft.; standing.

Hunt & Polk's No. 1 H. Ramirez, 7,075 ft. N of S cor. and 2,918 ft. from W line of Share A of Villa grant.. T.D. 860 ft.; standing.

F. J. Ossenbeck's No. 1 Adelfonso Rameris, 600 ft. W of Zapata-Roma highway, 150 ft. from SE line of Porcion 18 ..... Location.

H. L. Sargent et al's No. 1 Antonio Gutierrez heirs, 922 ft. from W line, 472 ft. from S line of Tract 2, Blk. 5, Nixon Subd., Porcion 10, San Ignacio Borrego grant ..... T.D. 1,115 ft.; coring.

F. J. Searight's No. 1 F. Munoz, 660 ft. from N line and on line between Blks. 81 and 82 of Searight Subd. of Porcion 18 ..... Rigging up.

Stevens & Pope's No. 1 Martinez, 150 ft. from S and E lines of Blk. 95, C. H. Sprague Subd. of Sur. 434 .... Location.

Southwest Texas Proven Areas

Week Ending August 26

NORMANNA POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks ..... Moving in.

NORTH PETTUS POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 4 Ray McKinney, 450 ft. due E of No. 3 Ray McKinney ..... Rigging up.

TULETA POOL—BEE COUNTY

Coquat & Hawn's No. 1 Harris, 1,000 ft. SE of Nichols' No. 1 Harris ..... T.D. 4,090 ft.; set csg.

John O'Neil & C.R.M. Drlg. Co.'s No. 1 Harris, 330 ft. from S and E lines of SW SE Sec. 3, Ragsley Subd. of Jose Uranga Sur. ..... T.D. 4,062 ft.; in sand.

Nichols and C.R.M. Drlg. Co.'s No. 2 Harris, 330 ft. from S and E lines of Blk. 7, Sec. 2 of Ragsley Subd. of Uranga Sur. ..... Rebuilding derrick.

L. L. Smith's No. 1 Harris, cen. Lot 14, Sec. 13, Ragsley's Sub. of Bee County ..... Rigging up.

The Texas Co.'s No. 1 Cox, west offset to Nichols' No. 1 Harris ..... T.D. 4,130 ft.; set csg.

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodriguez Sur. ..... T.D. 2,223 ft.; fishing.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tract in A. Manachaca Sur. 51. T.D. 1,416 ft.; drlg.

E. M. Carl's No. 1 F. Gembler, 160 ft. from N line, 750 ft. from E line of tract in J. Montez Sur. ..... T.D. 825 ft.; moving in heavy rig.

F. H. Eckert & Son's No. 1 Louis Brehm, W offset to No. 3 John J. Brehm ..... Location.

W. R. Swearingen's No. 1 Halbardier, 400 ft. SE of No. 10 Halbardier, J. F. Perez Sur. ..... Location.

ALTA MESA POOL—BROOKS COUNTY

Ed East's No. 3 Randolph Garcia, 1,000 ft. from S line, 200 ft. from W line of 2,161-ac. tract in La Escantada grant ..... Location.

DUNLAP POOL—CALDWELL COUNTY

Cole et al's No. 1 Pierce, 400 ft. from NE line, 445 ft. from NW line of Pierce 100 ac. tract in Solomon Seal Sur. ..... Derrick on ground.

Hicks-Richey's No. 1 Pierce, 300 ft. S of Bob Rose's No. 1 Walker ..... Drilling.

Owen & Gunby's No. 1 Dunlap, 700 ft. SW of Smilock's No. 1 Dunlap and 150 ft. from SE line of tract, S. Seal Sur. ..... T.D. 2,267 ft.; abnd.

SALT FLATS—CALDWELL COUNTY

Hickman et al's No. 1 C. A. Dickerson, 150 ft. N of cen. of S line of tract in John D. Rains Sur. ..... Spudded in and S.D.

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster Oil & Gas Co.'s No. 1 C. F. Robertson, 700 ft. from E line, 200 ft. from N line of 100-ac. tract, John A. Neill Sur. ..... Derrick.

NORTH GOVERNMENT WELLS—DUVAL COUNTY

F. J. Bissonet and Wm. McGinley's No. 1 Lundell, 150 ft. from E line, 666 ft. from S line of Sur. No. 48 ..... T.D. 1,925 ft.; drlg.

R. F. Byrd's No. 2 Wright, 330 ft. from S and W lines of Sur. No. 101 ..... Location.

R. F. Byrd's No. 1 R. T. Wright, 150 ft. from N and W lines of Sur. 101 ..... T.D. 2,311 ft.; whipstocking.

Magnolia Petroleum Co.'s No. 5 Wendt, 330 ft. from N and E lines of SE NW, Sur. 44 ..... T.D. 2,305 ft.; 960 bbls.

Magnolia Pet. Co.'s No. 1 Bryant White, 450 ft. from S line, 150 ft. from E line of SW NW Sur. 44 ..... T.D. 2,307 ft.; comp. 720 bbls.

George Parr's No. 1 Benavides School, 150 ft. from S and W lines of Sur. No. 44 ..... T.D. 1,680 ft.; drlg.

San Diego Oil Corp.'s No. 2 Riley, 150 ft. from N and E lines of NW NW Sur. No. 44 ..... T.D. 2,303 ft.; drlg. plugs.

Seacord & Putnam's No. 1 Johnson, 150 ft. from S and W lines of NW NW, Sur. 44 ..... T.D. 1,680 drlg.

Southwest Drilling Co.'s No. 2 Wendt, 450 ft. from S line, 150 ft. from E line ..... T.D. 2,262 ft.; comp. no gauge.

The Texas Co.'s No. 1 C. W. Freer, 150 ft. from S and E lines of SE NE, Sur. No. 45 ..... Location.

The Texas Co.'s No. 2 D. F. Freer, 660 ft. W of No. 1 D. F. Freer, Sur. No. 45 ..... T.D. 2,302 ft.; comp. 45 bbls. hr.

The Texas Co.'s No. 2 Riggs, 810 ft. from N line, 330 ft. from W line of NE NW of Sur. No. 46 ..... T.D. 2,275 ft.; set csg.

Whisenant, Trenchard and French's No. 2 Hahl, 462 ft. from E line, 230 ft. from S line of SW SW of Sur. No. 44 ..... T.D. 750 ft.; drlg.

SOUTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Humble Oil & Ref. Co.'s No. 6 White, 1,650 ft. from W line, 2,970 ft. from S line of Sur. No. 58 ..... T.D. 2,200 ft.; drlg.

SARNOSA POOL—DUVAL COUNTY

Edwin M. Jones' No. 1 J. F. Williams, 2,156 ft. from NE line, 150 ft. from NW line of Sur. No. 131 ..... T.D. 2,290 ft.; drlg.

Sarnosa Oil Corp.'s (Hynes & Nessly) No. 2 Well, 400 ft. SW of No. 1 Well ..... Rigging up.

Smith & Capps' No. 2-A Duval County Ranch Co., 200 ft. from SE and SW lines of W half of Sur. No. 574.. T.D. 2,280 ft.; comp. 1,000 bbls.

The Texas Co.'s No. 1 R. L. Brown, 635 ft. from SE and SW lines of N quarter of Sur. No. 574 ..... T.D. 1,150 ft.; drlg.

John F. Camp's No. 2 Weil, 1,200 ft. N, 18 deg. W of No. 1 Well in Sur. No. 570 ..... Set surface csg.

Smith & Capps' No. 4 Duval County Ranch Co., Sur. 576.. T.D. 2,340 ft.; set csg., waiting on cement.

Sun Oil Co.'s No. 2 Cuellar (Cano), 150 ft. from SW and SE lines of E¼ of Sur. No. 576 ..... Derrick.

The Texas Co.'s No. 2-A Duval County Ranch Co., 150 ft. from SW line, 573 ft. from SE line of W¼ of Sur. No. 574 ..... T.D. 2,475 ft.; comp. 1,000 bbls.

Thomas & Tarver, Inc.'s No. 2 Duval County Ranch Co., 660 ft. NW of No. 1 ..... Location.

SLICK POOL—GOLIAD COUNTY

Slick-Seelignon, Inc.'s No. 3 Allen, 1,650 ft. from NE and SE lines of tract in Obid Marshall Sur. ..... T.D. 4,000 ft.; coring hard rock.

SAL-MAR FIELD—GUADALUPE COUNTY

Sal-Mar Oil & Gas Co.'s No. 1 Hempel, 1,600 ft. from S line, 150 ft. from E line of tract in G. W. Williams Sur. ..... Rigging up.

George E. Smith's No. 1 Behring, 1,250 ft. from E line, 150 ft. from N line of G. W. Williams Sur. .... T.D. 2,023 ft.; setting csg.

A. W. Wormser's No. 1 Pfuliman, 450 ft. W of Sal-Mar Oil Co.'s No. 1 Zunker in L. Bollinger Sur. ..... T.D. 2,365 ft.; plugging back.

A. W. Wormser's No. 1 Harris, 150 ft. from N line of tract and 150 ft. E of creek in Green Dewitt Sur..... Derrick.

SANDIA POOL—JIM WELLS COUNTY

Larero Gas & Pet. Co.'s No. 3 Wade, 2,000 ft. S, 33 deg. W of No. 2 Wade, thence 1,970 ft. N, 57 deg. W ..... Material on ground.

JACOB POOL—McMULLEN COUNTY

Jacob, Buzzini & Pickett's No. 5-A Jacob, 1,320 ft. S 15 deg. W of No. 4-A, in W. H. Jacob Sur. No. 10... Rigging up.

Longhorn Oil Co. and American Gas Co.'s No. 1 Lark, 2,790 ft. from N line, 1,150 ft. from W line of Lark tract, E.W.B. Scrugham Sur. ..... Moving in.

WENTZ POOL—McMULLEN COUNTY

V. G. Schimmel's No. 1 Two Rivers Ranch, SE cor. of Sec. 59, 5 miles S of Wentz ..... T.D. 1,654 ft.; plugging back.

ADAMS FIELD—MEDINA COUNTY

Yantis Oil Co.'s No. 1 Adams, 420 ft. from S line, 2,000 ft. from W line of F. Mumme Sur. ..... T.D. 179 ft.; setting surface csg.

SAXET FIELD—NUECES COUNTY

Houston Oil Co.'s No. 1 Walton, 170 ft. from N line, 220 ft. from E line of 500-ac. tract ..... Derrick.

Houston Oil Co.'s No. 2-A Harrell, 1,112 ft. from N line, 170 ft. from W line of Sec. 28, Sheppard farm lots ..... T.D. 2,951 ft.; drlg.

Gulf Coast Oil Co.'s No. 2 Perkins & Gasse, 650 ft. from N line, 990 ft. from E line of Sec. 26 of Shepherd farm lots ..... T.D. 4,851 ft.; fishing.

Gulf Coast Oil Co.'s No. 1 Frank Bliss, 330 ft. from S and E lines of N half of 225-ac. tract ..... T.D. 4,533 ft.; drlg. plugs.

Kepley et al's No. 2 Roark, 150 ft. from S and W lines of Roark lease ..... Rigging up.

McCarthy-Rogers-Nix et al's No. 1 Isencee, 151 ft. from W line, 172 ft. from N line of Blk. 12 of Shepherd farm lots ..... T.D. 4,078 ft.; drlg.

LOS OLMOS POOL—STARR COUNTY

V. V. Combs' No. 1 Kelsey Bass, 150 ft. from N and W lines of NE NE, Sec. 6, Porciones 75, 76 and 77 .... Location.

Frank Doyno's No. 1 Seabury, 450 ft. from S line, 815 ft. from E line of 80-ac. tract in Share 5, of W portion of Porcion 75 ..... Spudded in and S.D.

Felder, Mitchell & Barnsley's No. 1 Kelsey Bass, 450 ft. from N and W lines of SE SW, Sec. 8, Kelsey Bass Subd. of Porcions 75, 76 and 77 of Jurisdiction of Camargo ..... T.D. 337 ft.; set csg.

Hooks & Weaver's No. 11 Kelsey Bass, 150 ft. from N line, 500 ft. from E line of NW NE, Sec. 8, Kelsey Bass Subd. ..... T.D. 475 ft.; testing.

W. E. Hopper's No. 3 Kelsey Bass, 150 ft. from E line, 365 ft. from S line of Sec. 6 ..... Location.

J. P. Moore and C. B. Van Matre's No. 1 Seabury et al, 150 ft. from E line, 750 ft. from S line of Share 5, Subd. of W part of Porcion 75 ..... T.D. 50 ft.; drlg.

Griffin et al's No. 1 Bass, 150 ft. from N and W lines of NW NW Sur. 11, Subd. Porciones 75, 76, 77 .... T.D. 1,400 ft.; standing.

Munday Bros.' No. 1 Seabury, 840 ft. from E line, 4,550 ft. from S line of Share 5, Subd. of W two-thirds of Porcion 75, Jurisdiction of Camargo ..... Rigging up.

Rio Oil & Gas Co.'s No. 3 Kelsey Bass, 150 ft. from W line, 365 ft. from S line of W 10-ac. tract of NE SW Sec. 6 ..... T.D. 340 ft.; drlg.

Rio Oil & Gas Co.'s No. 2 Kelsey Bass, 150 ft. from S and W lines of NW SE Sec. 6, Subd. of Porciones 75, 76, 77 ..... T.D. 475 ft.; waiting on cement.

Rio Oil & Gas Co.'s No. 4 Kelsey Bass, 150 ft. from E line, 570 ft. from S line of W 10-ac. of NE SW Sec. 6, Subd. of Porciones 75, 76, 77 ..... Spudded in.

Sinclair & Rutherford's No. 1 Kelsey Bass, 150 ft. from S and W lines of SE NW Sec. 6, Subd. of Porciones 75, 76, 77 ..... T.D. 430 ft.; in cavity.

Tarver & Nance's No. 5 Kelsey Bass, 450 ft. from S line, 750 ft. from W line of SW SE, Sec. 7 of Subd. of Porcions 75, 76 and 77, Jurisdiction of Camargo.. T.D. 320 ft.; drlg.

RIO GRANDE CITY POOL—STARR COUNTY

Heard & Swift's No. 3 Frank Doyno, 450 ft. from S and E lines of Blk. 8, Share 77-A of Porcions 80 and 81, Jurisdiction of Camargo ..... T.D. 1,425 ft.; drlg.

Jack Myers' No. 2 Doyno, 500 ft. from S line, 850 ft. from W line of Blk. 4, Share 77-2, Subd. of Porciones 80 and 81, Jurisdiction of Camargo ..... Derrick.

S. S. Smith's No. 1 O'Meara in Share 76 in W half of Porcion 79, Jurisdiction Camargo ..... T.D. 1,650 ft.; no report.

Edgar Swift's No. 2 Frank Doyno, 750 ft. from E line, 470 ft. from S line of Blk. 8, Share 77-A, Porcion 81.. Abnd.

E. D. Traylor's No. 1 Doyno, 150 ft. from S and W lines of W half of Blk. 7, Share 77-A of Porciones 80 and 81 ..... T.D. 2,162 ft.; drlg.

ROSENBERG POOL—WEBB COUNTY

Montex Oil Co.'s No. 1 M. Vela, 479 ft. from N line, 490 ft. from W line of Blk. 4, Sur. No. 267 ..... Derrick.

South Texas Oil Co.'s No. 7 Laurel, 200 ft. from N line, 150 ft. from E line of Blk. 10, Sur. No. 271 ..... T.D. 2,248 ft.; comp. 250 bbls.

South Texas Oil Co. (Rosenberg) No. 8 Laurel, 150 ft. from S line, 450 ft. from E line of Blk. 10, Sur. 271.. T.D. 1,500 ft.; drlg.

WEST COLE POOL—WEBB COUNTY

French Oil Corp.'s No. 1 Rosa Benavides, 450 ft. from S and W lines of Sur. No. 659 ..... T.D. 2,329 ft.; bailing.

ESCOBAS POOL—ZAPATA COUNTY

Allied Oil & Gas Co.'s No. 37 Gutierrez, 3,131 ft. from NE line, 491 ft. from SE line of Share 4, Comitas grant ..... Spudded in.

Blankenship & Hill's No. 1 Montemayor, 150 ft. from W line, 150 ft. from S line of Blk. 6, Sur. No. 64 ..... T.D. 1,482 ft.; abnd.

F. M. Blair & Son's No. 1 Montemayor, 450 ft. from N line, 150 ft. from E line of Blk. 1, Sur. 63 ..... T.D. 1,723 ft.; standing.

McGinley Oil Corp.'s No. 1 G. T. Montemayor, 150 ft. from N and W lines of Blk. 6, Sur. 64 ..... Location.

Shankle and Newton Oil Co.'s No. 18 Trevino, 338 ft. from SE line, 200 ft. from SW line of Blk. 14, Sur. 65 ..... T.D. 1,270 ft.; comp. 35 bbls.

S.R.C. Oil Co.'s No. 13-B Cuellar in Blk. 12, Sur. 64 ..... T.D. 975 ft.; drlg.

The Texas Company's No. 11 Measles, 1,316 ft. from SE line, 17,700 ft. from SW line of Cerrito Blanco grant ..... T.D. 1,200 ft.; comp. 50 bbls.

CHARCO REDONDO POOL—ZAPATA COUNTY

Hynes & Nessly's No. 1 Pablo Trevino, 4,829 ft. from NE line, 150 ft. from SE line of 1,066-ac. tract in Charco Redondo grant ..... Spudded in.

L. G. Smith's No. 1 J. M. Martinez, 350 ft. from NE and SE lines of Blk. 18, Share B, Dunke's Subd. of Charco Redondo grant ..... Location.

Windsor Oil Co.'s No. 1 Martinez, in NE of Blk. 15, of W. R. Duke Subd., Charco Redondo grant ..... T.D. 1,000 ft.; drlg.

MARKET RECORD OF OIL SECURITIES

By A. E. Mockler

NEW YORK, Aug. 29.—Oil securities have been well maintained in the generally strong market, but general uneasiness in financial circles over the reputed overproduction of refined products was indicated by the short-lived boom which the oils developed in midweek on news of an advance in gasoline prices in metropolitan New York.

The earning position of the integrated companies in the industry is vastly improved over that of but a few short months ago, but financial interests are apparently concerned lest the material headway which the oil industry has made toward recovery be jeopardized by continued overproduction of gasoline and other products, with resultant unfavorable reactions pricewise.

Sun Oil

Sun Oil Co. and subsidiaries report as of June 30 total assets of $97,371,031, as compared with $94,394,799 on June 30, 1931. Current assets totaled $24,322,522 and current liabilities $7,724,060, compared with $24,162,430 and $10,832,722, respectively, on June 30 of last year.

S. O. Kansas

Standard Oil Co. of Kansas, which last week sold its refinery and pipe line properties to Standard of Indiana for $3,400,000, has been reorganized and incorporated as a Delaware company with the same name. Standard of Kansas stockholders will meet September 26 to vote on the Standard of Indiana deal, as well as on the formation of the new company and proposed reduction in book value of capital shares.

Humble

Humble Oil & Refining Co. has declared the regular quarterly dividend of 50 cents per share, payable October 1 to stock of record September 1.

Standard of Nebraska

Standard Oil Co. of Nebraska has declared the regular quarterly dividend of 25 cents a share, payable September 20 to stock of record August 27.

Chesebrough

Chesebrough Manufacturing Co. has declared the regular quarterly dividend of $1 a share and the usual extra of 50 cents a share, both payable September 30 to stockholders of record September 8.

North Central Texas

North Central Texas Oil Co. reports for the June quarter net profit of $13,288 after depletion, Federal taxes, etc., comparing with $7,914 net profit in the previous quarter and net loss of $1,915 in the June quarter last year. Net profit for the first half of 1932 was $21,202 after taxes and charges, against $5,616 in the first six months of 1931. The company has declared the regular quarterly dividend of $1.62½ per share on the 6½ per cent preferred, payable October 1 to stock of record September 10.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb based on closing quotations for Wednesday, was as follows:

Jan. 20	13.14	May 11	13.23
Jan. 27	12.79	May 18	12.57
Feb. 3	13.19	May 25	12.44
Feb. 10	12.02	June 1	11.34
Feb. 17	13.28	June 8	11.39
Feb. 24	13.45	June 15	11.86
Mar. 2	13.61	June 22	11.41
Mar. 9	14.38	June 29	12.09
Mar. 16	13.00	July 6	11.75
Mar. 23	13.02	July 13	12.19
Mar. 30	13.85	July 20	12.47
Apr. 6	12.12	July 27	14.50
Apr. 13	11.31	Aug. 3	15.18
Apr. 20	12.11	Aug. 10	17.21
Apr. 27	12.46	Aug. 17	16.21
May 4	11.73	Aug. 24	17.19

Atlantic Refining

Atlantic Refining Co. and subsidiaries report for the six months ended June 30 gross operating income of $41,597,018 and net profit for the period, after operating charges, interest on funded debt, and other charges, of $3,184,824. In the corresponding period last year the company reported gross operating income of $50,966,346 and deficit of $4,012,963 after all charges.

Total assets on June 30 were $162,662,162, compared with $160,489,090 on the same date last year. Consolidated balance sheet as of June 30 shows total current assets of $42,045,341 and current liabilities of $7,029,240, as compared with $41,412,231 and $6,126,728, respectively, as of December 31, 1931.

Foster Wheeler

Foster Wheeler Corp. has declared the regular quarterly dividend of $1.75 on the $7 preferred, payable October 1 to stock of record September 12.

Texas Pacific

Texas Pacific Coal & Oil Co. reports for the June quarter net profit of $92,988 after charges, depreciation and depletion, compared with net loss of $464,843 in the corresponding quarter last year. For the half year net profit was $416,283, against net loss of $690,237 in the corresponding period of 1931.

Phillips Petroleum

Phillips Petroleum Co. shows second quarter earnings of $1,324,430, after all charges, equal to 32 cents a share on

Independent Oils on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ending Aug. 20)

1932 High	1932 Low	Week ended Aug. 20 Sales	Week ended Aug. 20 High	Week ended Aug. 20 Low	Close Aug. 24	Stocks		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
¾	¼	500	⅝	7/16	7/16	American Maracaibo	(sh)	700,000	N.P.	....	.....	8⅝	1⅛	4½	½	1¾	¼
2⅝	¾	800	2⅝	2⅛	2⅛	Arkansas Natural Gas	(sh)	4,084,225	N.P.	....	.....	26	3¾	16¾	4⅝	6½	1⅞
2⅝	½	6,100	2¼	2	2¼	Arkansas Natural Gas "A"	(sh)	3,522,521	N.P.	....	.....	24¾	6½	16⅝	4⅝	6¾	1⅞
5½	1½	1,200	4¼	3⅜	4⅞	Arkansas Natural Gas pfd.	(sh)	2,193,000	$10	....	4- 1-32	9	4	8⅛	6¼	7	3⅞
9¾	7	No sales	..	..	..	British American Oil Corp.	(sh)	2,622,642	N.P.	20cQ	10- 1-32	62	7⅞	23	13⅜	16⅞	6¼
⅝	⅛	200	⅝	⅝	⅝	Carib Syndicate		$131,250	25c	....	.....	4⅞	1	2¾	⅝	2⅝	¼
6⅞	1¼	119,300	5¾	4⅞	5⅜	Cities Service	(sh)	36,418,721	N.P.	....	6- 1-32	68½	20	44¼	13	20¾	5
53⅜	10	1,700	27¼	25	27⅛	Cities Service pfd.	(sh)	1,125,931	N.P.	....	6- 1-31	98¾	84	93⅞	78¼	84¾	35⅜
⅛	1/16	No sales	..	..	..	Colombia Syndicate		3,250,000	N.P.	....	.....	..	..	21	3⅜	7⅛	1
1⅞	½	1,800	1⅜	1¼	..	Columbia Oil & Gasoline v.t.c.	(sh)	$2,000,000	$1	....	.....	2	½	¾	⅛	½	1/16
1⅛	¼	1,100	1⅛	1	1⅛	Colon Oil	(sh)	2,200,000	N.P.	....	.....	15	3⅞	8¼	1⅛	3½	⅛
2	1	No sales	..	..	2	Consolidated Royalty Oil Co.		$5,527,880	$10	5cQ	7-25-32	11⅛	2½	5⅞	2	2¾	1
1⅞	¼	1,900	1⅝	1	1⅞	Cosden Oil	(sh)	323,950	N.P.	....	.....	135	42	74¾	1¼	3¾	⅜
5⅜	1⅝	900	5⅜	4¼	..	Darby Petroleum	(sh)	609,696	N.P.	....	10-15-30	26	6½	21⅜	4¼	5	1¾
2¾	1	400	2	1¾	2¾	Derby Oil & Refining	(sh)	500,000	N.P.	....	.....	11	2	11	2	6	1½
24½	10½	No sales	..	..	..	Derby Oil & Refining pfd.		48,500	N.P.	....	.....	44	20¾	60	30	40⅛	25
41	23	5,900	39¼	35½	39⅝	Gulf Oil Corp.	(sh)	4,504,921	$25	....	10- 1-31	209	115	166⅞	58½	75½	25⅜
4½	2½	No sales	..	..	..	Indian Terr. Illum. Oil "B"	(sh)	7,090,037	N.P.	....	.....	..	..	53½	12⅝	16⅞	5
¼	1/16	3,500	1/16	1/16	⅛	Intercontinental Petroleum		$5,682,000	$5	....	.....	2⅞	⅜	1¾	⅜	⅝	⅛
1	⅝	900	⅝	½	..	Kirby Petroleum	(sh)	750,000	N.P.	....	.....	3⅝	1¼	3	⅞	1⅞	¼
¾	⅛	500	⅝	⅝	..	Leonard Oil & Development		$50,000,000	$25	....	.....	14⅞	2½	5	¾	2	½
1	½	4,200	⅞	¾	⅞	La. Land & Exp.	(sh)	3,000,000	N.P.	....	.....	6⅛	1	4⅜	½	1½	¼
3½	⅞	No sales	..	..	3½	Lion Oil & Refining	(sh)	250,000	N.P.	....	10-27-30	38⅞	18	29	4⅞	6¾	1½
9¼	3⅝	3,000	7⅞	7⅜	7¾	Lone Star Gas	(sh)	5,000,000	N.P.	16cQ‡	6-30-32	67⅞	28	55⅞	19⅝	25	5½
⅛	1/16	11,000	1/16	1/16	1/16	Magdalena Syndicate	(sh)	850,000	$1	....	.....	1¼	½	½	⅛	½	¼
6⅛	3¾	No sales	..	..	..	Margay Oil Corp.		160,000	N.P.	25cQ	7-11-32	38½	14	16	3	5	1⅞
5¼	1⅝	300	3⅞	3½	4	Memphis Natural Gas	(sh)	920,000	N.P.	....	4-15-32	24	8⅛	22¼	7½	12⅛	4½
3	1½	300	3	2	..	Mexico-Ohio Oil Co.		500,000	N.P.	....	.....	6¾	2¼	7½	1¾	4¼	1¼
⅛	⅛	No sales	..	..	..	Mountain & Gulf		$4,000,000	$1	....	4-15-31	1½	½	⅝	⅜	½	⅛
4½	2⅛	700	4¼	4⅛	4¼	Mountain Producers		$1,682,182	$10	20cQ	7- 1-32	22⅞	7	12⅛	3¾	5⅞	2
13⅞	8	3,000	13⅞	12⅞	..	National Fuel Gas	(sh)	3,810,183	N.P.	25cQ	7-15-32	43⅞	23	41⅜	19⅜	26½	9¾
⅝	⅜	No sales	..	..	..	New Bradford Oil		$7,224,186	$5	....	4-15-31	5	2½	3½	1⅛	1½	½
1	⅝	500	⅞	⅝	..	New Mexico and Arizona		$1,000,000	$1	....	.....	9⅜	2¼	7¼	1½	3	¾
1½	⅝	No sales	..	..	..	North Central Texas	(sh)	262,446	$5	....	9- 2-30	18½	6⅛	11¼	2⅛	3¼	⅝
⅜	1/16	1,500	⅜	¼	1/16	North European Oil	(sh)	1,372,391	N.P.	....	.....	..	..	6¼	⅝	2⅛	¼
6¼	3	700	5¼	4¼	..	Pacific Western Oil	(sh)	1,000,000	N.P.	....	.....	26⅝	12½	19½	5½	15	2⅞
⅛	1/16	No sales	..	..	..	Pandem	(sh)	1,291,493	N.P.	....	.....	3½	½	2½	¼	½	1/16
⅝	1/16	600	½	½	..	Pantepec Oil	(sh)	1,595,500	N.P.	....	.....	10½	1⅞	4⅜	⅞	2	⅜
10⅞	6	400	9¾	9¼	9½	Plymouth Oil	(sh)	1,050,000	$5	25cQ	7- 1-32	37	22	27½	16¼	19	6
½	1/16	300	½	½	½	Reiter-Foster	(sh)	388,584	N.P.	....	12- 2-29	8½	1⅛	5⅜	1	3⅛	¼
1	¼	100	½	½	..	Richfield Oil pfd. x.w.	(sh)	399,950	$25	....	.....	31½	22	23½	6½	11	¼
1⅝	⅝	No sales	..	..	..	Ryan Consolidated	(sh)	296,931	N.P.	....	.....	11	2	8⅝	2	3	⅝
½	⅛	No sales	..	..	..	Salt Creek Consolidated	(sh)	1,286,300	$10	....	4- 1-31	5⅞	1⅞	2½	½	1⅜	⅛
5½	2⅞	600	5	4⅞	5⅛	Salt Creek Producers	(sh)	1,496,859	$10	25c	8- 1-32	25⅞	9	15¼	5¼	7¾	2⅝
⅝	¼	1,300	½	1/16	..	Sunray Oil	(sh)	1,163,185	$5	....	4-15-31	12	5⅝	10	2	5¼	¼
8	4½	500	7	7	7⅜	Texon Oil & Land	(sh)	936,036	N.P.	25c	6-30-32	23	7⅛	19½	8	12⅞	2½
½	⅛	No sales	..	..	..	Venezuelan Petroleum	(sh)	755,090	$5	....	2-15-30	6½	1¾	4½	¾	1⅞	¼
2	1½	No sales	..	..	..	Woodley Petroleum		$500,000	$1	....	3-31-29	9½	2	5	½	3½	1½
⅝	⅛	400	⅝	½	..	Y Oil & Gas		100,000	N.P.	....	.....	2⅞	½	2½	⅜	2¼	¼

*Ex-dividend. ‡Payable in stock. §Paid in lieu of regular cash dividend of 2 per cent.

4,156,908 no par shares, compared with net loss of $2,136,922 in the previous quarter and let loss of $2,045,802 in the second quarter last year.

Pierce Petroleum

Pierce Petroleum Corp. reports for the June quarter net loss of $18,736 after expenses, franchise taxes, etc. This compares with net loss of $13,141 in the previous quarter, and net income in the second quarter of 1931 of $136,016, equal to 5 cents a share on 2,500,000 shares of no par capital stock. For the first half of 1932 net loss of $31,877, after charges and taxes is shown, comparing with net income of $280,440, equal to 11 cents a share, in the first half of 1931.

Pacific Western

Pacific Western Oil Co. and wholly owned subsidiaries report for the first six months of 1932 net loss of $235,400 after taxes, depreciation and depletion. This compares with net loss of $688,521 in the first six months of 1931.

El Dorado

El Dorado Oil Works Co. has declared a quarterly dividend of 37½ cents per share, payable September 15 to stock of record August 31.

Standard Oil Stocks on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ending Aug. 20)

1932 High	1932 Low	Week ended Aug. 20 Sales	Week ended Aug. 20 High	Week ended Aug. 20 Low	Close Aug. 24	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
7	6	No sales ..	..	..	..	Borne Scrymser		$1,000,000	$25	....	10-15-30	46½	25	25	11¾	16	6
35	17½	500	25	24¼	24	Buckeye Pipe Line		$10,000,000	$50	75cQ	9-15-32	74½	55	69	39⅞	56	30
90	53	No sales ..	..	..	..	Chesebrough Mfg.		$3,000,000	$25	$1Q‡	9-30-32	210	130	184⅞	104¼	129½	75
3⅛	1¾	8,300	3⅛	2⅝	..	Creole Petroleum	(sh)	5,977,872	N.P.	....	.....	11¾	5⅝	7⅞	3	3⅞	1⅝
35	18	100	24¼	23½	27	Eureka Pipe Line		$5,000,000	$100	$1Q	8- 1-32	70½	40	54¾	26	36	19
32½	35⅝	400	50⅜	48	52½	Humble Oil & Refining		$74,103,300	$25	50cQ	10- 1-32	128	74⅛	119	57¼	72	44¾
10	6¼	1,700	9¼	8¾	9¼	Imperial Oil of Canada	(sh)	26,557,496	N.P.	12½cQ	9- 1-32	41	22	30	15	18¾	7⅝
7½	2¾	No sales ..	..	..	..	Indiana Pipe Line		$3,000,000	$10	10cQ	5-14-32	41⅞	26	41	14½	21⅛	5½
11⅝	8	7,100	11⅜	10½	11¼	International Petroleum	(sh)	14,247,088	N.P.	25cQ	9-15-32	30⅜	15	24	11⅜	15½	7⅜
10½	6	400	8½	8	..	National Transit		$6,362,500	$12.50	20cQ	9-15-32	25⅛	10⅛	22⅜	11½	17½	5
5½	2¼	300	4⅞	4½	4⅞	New York Transit		$500,000	$5	10cQ	4-15-32	17½	10	21⅜	10⅛	14½	5⅜
4⅜	3⅛	No sales ..	..	..	..	Northern Pipe Line		$1,200,000	$10	25c	7- 1-32	63	41	54	26¼	35½	20
9	4	100	7¼	7¼	..	Penn Mex Fuel		$10,000,000	$25	50c	5-25-32	44½	20	32	12	15½	5½
16½	9⅝	1,000	14⅝	14	15½	South Penn Oil		$30,000,000	$25	25cQ	6-30-32	60¼	35⅛	45⅞	16⅛	23⅞	9¼
10	5	No sales ..	..	..	..	Southern Pipe Line		$1,000,000	$10	15cQ	9- 1-32	22½	13	20⅞	8⅜	17	7
37	27	No sales ..	..	..	..	Southwest Pennsylvania Pipe Line		$1,750,000	$50	$1Q	7- 1-32	70	60	64	32	42½	25
24¼	13⅛	25,200	24¼	22¾	24½	Standard Oil of Indiana		$424,914,895	$25	25cQ	9-15-32	63	45	59⅞	30	38½	13½
15⅞	8⅞	4,000	13¾	12	13⅞	Standard Oil of Kentucky		$25,654,516	$10	30cQ	6-30-32	46⅞	29	40½	18⅝	23⅝	12⅛
19	10¼	200	15½	15½	..	Standard Oil of Nebraska		$4,770,550	$25	25cQ	9-20-32	50¼	40	48⅞	34⅝	36½	16
30⅛	15½	650	27	25	..	Standard Oil of Ohio		$18,811,675	$25	62½cQ	7- 1-32	129	60	108½	43¼	62½	23
2	1⅝	No sales ..	..	..	..	Swan-Finch Co.	(sh)	34,480	$25	....	1-15-29	18	10	10	4	4½	1

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus 50 cents extra.

Transactions in Oil Shares on New York Stock Exchange

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ending Aug. 20)

1932 High	1932 Low	Week ended Aug. 20 Sales	Week ended Aug. 20 High	Week ended Aug. 20 Low	Close Aug. 24	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
20½	12	900	19½	18⅝	20	Amerada Corp.	(sh)	844,200	N.P.	50cQ	1-30-32	42⅝	17½	31½	16½	23	11¼
4	¼	No sales ..	..	..	..	American Republics Corp.	(sh)	209,180	N.P.	....	12-31-30	64¾	12½	37	5½	12⅜	1¼
16½	6½	No sales ..	..	..	..	Associated Oil		$44,356,180	$15	25cQ	7-15-32	47¼	34½	51	30	31	8⅝
19¾	8⅝	38,300	18⅞	17	19⅛	Atlantic Refining		$67,416,050	$25	25cQ	9-15-32	77⅞	30	51⅜	16⅝	23⅝	8⅝
6¾	3⅜	19,900	6⅝	5⅞	6¼	Barnsdall Corp. A		$11,293,895	$5	....	5-11-31	49⅛	20	34	8⅝	14½	4
17½	4¼	124,200	15⅝	12⅜	17⅜	Columbia Gas & El.	(sh)	11,684,220	N.P.	25cQ	8-15-32	140	52	87	30⅝	45⅝	11⅝
12	9	300	12	10½	..	Colonial Beacon Oil	(sh)	1,444,970	N.P.	....	12-22-22	32⅞	12½	20⅜	8¾	10½	7½
9	4	41,600	8½	7⅝	8½	Consolidated Oil Corp.	(sh)	14,218,835	N.P.	....	.....	..	..	..	..	..	..
7⅝	3⅝	36,100	7⅝	6¾	7¼	Continental Oil of Delaware	(sh)	4,738,594	N.P.	....	12-15-27	47⅞	18	30½	7¾	12	5
35⅜	9½	22,800	17¾	15¾	17¾	General American Tank Car	(sh)	751,638	N.P.	25cQ	7- 1-32	123¾	75	111⅞	53⅛	73⅛	28
15½	4¾	3,800	11⅝	10¼	10⅛	General Asphalt	(sh)	413,333	N.P.	....	6-15-32	94¾	42¼	71½	22⅜	47	9⅝
24⅜	8¾	14,200	21⅝	18	23½	Houston Oil		$24,968,600	$100	....	10-17-30	109	26	116⅞	29¼	68½	15¾
1⅝	1	No sales ..	..	..	..	Indian Refining		$12,564,070	$10	....	10- 1-30	53	13⅛	17	2	4⅝	1⅛
2¼	½	500	1¾	1½	1¼	Louisiana Oil Refining	(sh)	1,309,069*	N.P.	....	.....	18	7	12	3½	4½	1
1½	⅜	100	1⅛	1⅛	..	Maracaibo Oil	(sh)	330,000	N.P.	....	.....	18½	5¼	10⅜	1⅜	3⅜	½
7⅞	3¾	10,800	7⅜	6½	7	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	....	2-16-31	39⅞	22⅛	32	11	16¾	5
9¼	3½	200	8½	7½	9	National Supply of Delaware	(sh)	390,879	$50	....	5-15-31	144	98½	124¾	60	70¼	5
11	5	16,800	10⅝	9½	10⅜	Ohio Oil	(sh)	6,648,052	N.P.	20cQ	9-15-32	79⅞	64¼	32	16	19½	5⅛
9⅝	6	No sales ..	..	..	..	Pan American P. & T.	(sh)	1,000,000	$5	20cQ	9-15-32	69	40½	46½	42	35⅛	20
12½	7¼	3,600	12½	9½	..	Pan American P. & T. "B"	(sh)	2,474,288	$5	20cQ	9-15-32	69¼	40½	67¼	30	36½	18
1¼	½	400	1⅛	1	..	Panhandle P. & R.	(sh)	199,370	N.P.	....	.....	15¼	3	12⅜	1⅜	4¼	⅝
7⅞	2	14,700	7½	6⅝	7½	Phillips Petroleum	(sh)	4,156,908	N.P.	....	1- 2-31	47	24¼	44⅝	11½	16⅝	4
½	¼	3,400	½	⅝	½	Pierce Oil Corp.		$29,622,831	$25	....	.....	3⅜	1	2½	½	1½	¼
1⅜	½	3,200	1⅜	1	1¼	Pierce Petroleum	(sh)	2,500,000	N.P.	....	2-16-31	5⅞	½	7⅛	1⅛	3⅝	½
8⅞	3½	No sales ..	..	..	8½	Prairie Oil & Gas		$61,035,800	$25	....	3-31-31	65⅜	40½	54	11¼	20⅜	4⅛
12⅛	5½	700	11⅞	11	11⅝	Prairie Pipe Line		$101,250,000	$25	....	6-30-31	65	45	60	16⅝	28½	5⅞
1⅝	⅛	700	¾	⅝	..	Producers & Refiners		$37,438,950	$50	....	9-15-23	25⅞	4	11⅞	1	6	1
9¾	1	100	8	8	..	Producers & Refiners pfd.		$2,845,350	$50	....	5- 4-25	46¾	25½	40	11½	16	3
6¼	2⅞	6,700	5⅞	5⅛	6	Pure Oil		$75,959,250	$25	....	9- 1-30	30⅜	20	27¼	7⅝	11⅞	3¼
1⅜	¼	4,200	¾	¾	1	Richfield Oil (new)		$52,410,875	N.P.	....	.....	49⅝	20	9¾	4⅛	6⅝	⅝
3½	1¾	3,200	3⅛	3	3¼	Rio Grande Oil	(sh)	1,236,270	N.P.	....	7-25-30	42½	15	25¾	5	10¼	1¼
23	12⅛	7,800	21⅜	20	21¼	Royal Dutch N. Y.	(sh)	611,303	....	80½c†	8- 5-32	64	43⅛	56½	36⅞	42⅝	13
16¼	6⅝	55,000	15⅝	14	15⅝	Seaboard Oil of Delaware	(sh)	1,244,383	$4	10cQ	6-15-32	59⅜	8¼	37	9¾	20¾	5½
15¾	8	190	14	12	..	Shell Transport & Trading Co.		£23,985,000	£1	53c†	7-22-32	51½	40⅝	48⅜	26	34	5
7⅛	2½	25,300	6⅞	6⅛	6⅝	Shell Union Oil	(sh)	13,066,497	N.P.	....	6-30-30	31¾	19	25½	5¼	10¼	2½
48	18	2,300	48	45	47½	Shell Union Oil pfd.	(sh)	400,000	$100	....	7- 1-31	108¼	93	106¼	55	78	15
7¼	3¼	2,800	6⅞	6⅜	6¾	Simms Petroleum	(sh)	600,000	$20	....	9-15-30	40½	15	37	5⅝	11	3½
5	2½	1,100	4½	4⅜	4¾	Skelly Oil		$27,441,250	$25	....	12-15-30	40½	28	12	10⅛	12⅞	2
29¾	12	1,100	29¾	28¾	..	Skelly Oil pfd.	(sh)	119,800	$100	....	5- 1-31	..	..	99¾	42	62	10
11⅞	5¼	32,900	11½	10¼	11⅝	Socony-Vacuum		$793,613,588	$25	20cQ	9-15-32	..	..	106⅜	98	106	87⅛
92½	81	1,800	92½	90½	..	Standard Oil Export pfd.	(sh)	764,885	$100	$2.50SA.	6-30-32	..	..	..	..	21	8⅝
28⅞	15⅛	30,160	28¼	25⅞	29⅝	Standard Oil of California	(sh)	13,102,900	N.P.	50cQ	9-15-32	81⅞	51½	75	42½	51¾	23⅛
16½	7	6,400	16½	12	15	Standard Oil of Kansas		$8,000,000	$25	....	3-16-31	33¾	18	49	14⅜	19	7¾
36¾	19⅞	71,160	35⅜	32½	35¾	Standard Oil of New Jersey		$637,961,700	$25	25cQ‡	9-15-32	83	49	84⅞	32½	52½	26
33¼	24¾	500	33¼	33	32	Sun Oil	(sh)	1,416,869	N.P.	25cQ	9-15-32	68⅜	55	70	39	45¼	26¾
1¼	¼	6,200	1¼	⅞	1⅛	Superior Oil Corp.	(sh)	766,979	N.P.	....	12-20-30	24	5¼	9⅜	⅜	1⅝	⅛
17⅜	9¼	30,900	17	14⅞	16⅞	The Texas Corporation		$246,204,900	$25	25cQ	7- 1-32	71⅞	50	60½	28¼	36¼	9⅞
4	1½	2,400	3⅜	2⅞	..	Texas Pacific Coal & Oil Co.		$9,304,890	$10	....	12-31-29	23⅞	9½	14½	4	6½	1⅞
9	5	No sales ..	..	..	..	Tide Water Oil	(sh)	2,191,823	N.P.	25cQ	6-30-32	40	14	31	13	18	9⅞
58½	30	No sales ..	..	..	..	Tide Water Oil pfd.	(sh)	199,446	N.P.	$1.25Q	8-15-32	97½	85⅛	94⅞	71	83	30
5¼	2	37,100	5⅛	4⅛	5	Tide Water Associated	(sh)	5,560,424	N.P.	....	2-16-31	23½	10	17¾	5⅞	9	2⅛
50	20	1,100	49½	47½	51	Tide Water Associated pfd.		$73,284,500	....	$1.50Q	7- 1-32	90⅞	74⅛	89¾	55	68	20½
13⅞	8	5,400	13⅛	12¼	13⅞	Union Oil of California		$108,651,750	$25	25cQ	8-10-32	57	42⅛	50	10⅛	26⅝	11
19¼	11¾	300	14½	13	15½	Union Tank Car	(sh)	1,254,048	N.P.	35cQ	9- 1-32	163¾	121⅞	38½	23	25½	16
1⅝	½	1,100	1	1	1⅝	Warner-Quinlan	(sh)	632,948	N.P.	....	7- 1-30	42⅞	15	27	4¼	7⅜	⅞
8¼	2¾	21,100	8	6	6⅝	Wilcox Oil & Gas	(sh)	428,967	$5	...	5-10-28	29¾	12⅞	21	6½	9⅝	2⅝

*Ex-dividend. †Interim dividend for 1931. ‡Plus extra dividend of 25 cents.

In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been stock split-ups.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

Shale and Petroleum Hydrocarbons Are Related

Are the oily substances obtained from oil shale, coal, and petroleum of a similar character? Can you give me some references on this subject?—S. A. O.

The relation of the hydrocarbons obtainable from shale, coal, natural gas and petroleum was an important matter to establish during the court hearing involving the famous Saybolt patent for the extraction of gasoline from gas by the absorption process. It was shown in the hearing of that case that shale, coal, natural gas and petroleum are analogous bituminous substances. The evidence pointing to this fact was based on the work of well-known investigators. C. F. Mayberry, who made extensive contributions to the chemistry of petroleum, stated in Industrial and Engineering Chemistry, 6, 104, 1914: In the petroleum under consideration several uncertain features usually not acceptable to the geologist and chemist were eliminated in the study of Mahone petroleum. In the first place, the shallow depths of the oil strata and its apparent common origin from vegetation with the exensive beds of coal close at hand, indicate a more recent formation of these oil deposits than can be assigned to other well-known varieties that occur at greater depth. In the Mahone Field the oil sand has evidently not been disturbed since the oil was therein accumulated. The neighboring coal strata suggested a coincident formation of the oil as an intermediary product between vegetation and coal, and that subsequent geological conditions of heat and pressure forced out the liquid hydrocarbons forming the oil deposits as they now appear. Confirmation of this is found in the preparation of two hydrocarbons, identical in composition, from a coal and from Canadian petroleum, by Pictet and Bouvier. The preparation of oil and gasoline from shale is mentioned by D. E. Winchester, Bulletin 641-F, U. S. Geological Survey, by ordinary methods of refining. The oil from certain samples of shale yield 6 to 12 per cent gasoline. Woodruff and Day state, in U. S. Geological Survey Bulletin 581-A, these shale oils under ordinary predistillation yield oil ranging from 17° to 24° Be. Analyses are given showing the similarity in composition of the gas obtained from shale and that obtained from coal. The primary volatile products of the carbonization of coal are discussed by Taylor and Porter in Technical Paper 140 of the U. S. Bureau of Mines.

Dr. E. Berl, speaking before the Fuel Institute, May 11, 1932, on the "Formation of Bituminous Coal, Mineral Oil and Asphalt," as reported in Oil News, May 19, 1932, page 444, said: "The position may be such that there is not any one single source of origin for mineral oil. The differences in the compositions of individual oil deposits rather support this theory. We believe that the theory developed by us has its justification, namely, that bituminous coal, mineral oil and asphalt, which are all built up fundamentally from the same classes of compounds—aliphatics, aromatics and hydroaromatics—are related one to another, and, further, that it depends on the geochemical conditions prevailing, whether the compounds formed in the intermediary stages of the coalification of cellulose give rise to bituminous coal or are further changed with the formation of oxygen-containing compounds, which in turn are converted by hydrogenation or cracking into hydrocarbons similar in type to mineral oils or asphalts, with the retention of the basic compounds—the aliphatics, aromatics and hydroaromatics."

Products Obtainable from East Texas Crude

Can you give me an analysis of the average East Texas Field crude setting forth the number of gallons of gasoline, lubricating oil and other products which are realized through typical refining processes such as are employed by the major companies?—B. L. L.

The refining value of East Texas crude is high and it is classified among the better petroleums of the United States. The exceptional characteristics of this oil include—the high wax content, the large percentage yield of high octane number gasoline obtainable and the low sulphur content. Analyses of the East Texas oils have been discussed by W. T. Ziegenhain in The Oil and Gas Journal, April 23, 1931, page 24; also by Egloff, Nelson and Truesdell, issue of May 21, 1931, page 40. The material following has been arranged from these articles.

The oil represented by the analysis below was from the Longview-Joiner area.

Tests on East Texas Crude and Direct Products

Gravity A.P.I.	30.1°
Sulphur, per cent	0.25
Pourpoint	45° F.
Viscosity @ 100° F.	42
I.B.P.	114° F.

Products

	Per cent
Gasoline	40.7
Gr. 56-57	
I.B.P. 110°	
Endpoint 430°	
Oct. No. 50-62	
Kerosene	1.1
Gr. 40-41	
Gas oil	22.2
Lubricating dist.	5.6
Fuel oil 19-20 A.P.I.	27.8
Loss and Gas	2.6

(Wax estimated 2 to 2.5 per cent)

A number of anaylses are reported in the Egloff, Nelson and Truesdell article, including the combination of straightrun operation and cracking. The octane number of the cracked gasoline being shown as ranging from 68 to 77. The summary of the products obtained by straightrun and cracking are given in the table, all results being based on the original crude.

Summary

	Per cent of crude	
Straightrun gasoline	37.6	
Cracked gasoline	23.9	
Total gasoline		61.5
Kerosene		5.9
Light gas oil		12.0
Pressure dist. bottoms		9.7
Coke, lbs./bbl.	65	
Gas, cu. ft./bbl.	485	
Coke, gas and loss		10.9

"When desired, the cracking process may be operated by the 'flash residuum method' to produce gasoline and Bunker C fuel oil. The yield of high antiknock motor fuel will be over 75 per cent with 20 per cent Bunker C low cold test fuel oil based on the Joiner crude oil."

Carbon Residue and Asphaltic Material in Lub Oil

Is carbon residue of any particular value when judging the quality of a lubricating oil? Does the asphaltic content in a transmission oil impair the value from a lubrication standpoint?—G. P. N.

The carbon residue is the quantity of soft coke and carbon remaining when a lubricating oil is distilled under certain conditions. It appears reasonable to assume that a lubricating oil will decompose and leave a similar deposit within the cylinders of a motor when the oil passes the rings. The lighter or low viscosity oils will tend to pass the rings much easier than the heavy high viscosity oils. If there are two oils under examination both having the same viscosity, the one showing the smaller percentage of carbon residue would be the better. It is usually true that the more highly refined lubricating oils have the lower carbon residue percentages. The percentage of carbon residue is considered important when purchasing high grade lubricating oils.

The presence of hard asphalt in a transmission oil would be objectionable, but soft asphalt, a reasonable normal quantity, would do no harm if there were no tendency for part of the oil to become hot enough to evaporate with the result that hard deposits would form. An asphaltic oil would show a high carbon residue test and the same reasoning would apply as for the high carbon residue oils.

Surface Tension of Crude and Refined Products

We would like to know the surface tension of Mid-Continent crude and the regular products, such as gasoline, kerosene, lubricating oils, etc. Is there a simple method for finding surface tension?—C. H. E.

The surface tension of petroleum and petroleum products was discussed in an article by Francis and Bennett, Ind. Eng. Chem., 14, 626, 1922; the experimental work being based on the method described in the Journal of General Physiology, 1, 521, 1919, from which the following is abstracted:

Surface tension of a liquid is due to the cohesive action of the particles composing the fluid. The cohesive forces act in all directions below the surface, a particle in the interior being equally attracted on all sides, but a particle in the surface layer is attracted inwards by adjoining particles, the corresponding attraction by the few particles in the vapor phase being negligible. Hence, at the surface of every liquid there is a force, called surface tension, which acts inward and causes the liquid to behave as if it were covered by an elastic skin.

The data mentioned below were determined by the duNouy apparatus, which is of simple construction and easily manipulated. This is a torsion balance, but in place of measuring the tensions by means of weights the torsion of a wire is used to counteract the pull of the liquid film and to break it. A single reading on a dial supplies a figure from which, if the apparatus has been previously standardized with water, the surface tension may be obtained by a simple proportion. The instrument consists of a stand at the top of which is stretched a fine steel wire. One end of the wire is tightly clamped and the other is controlled by a thumb screw; to the worm wheel is also attached a pointer which moves over a scale graduated in degrees. To the middle of the wire is clamped a lever with a small hook in the outer end, a stirrup is attached to this hook, carrying a carefully made loop of platinum wire with a periphery exactly 4 cm. in length. When making a test the vessel containing the liquid under examination is placed on the platform, carefully raised by means of the adjusting screw until the platinum loop has made contact with the liquid. The pointer having been set at zero, the torsion of the wire is gradually increased, by means of the thumbscrew controlling the worm gear, until the loop of wire tears loose from the liquid. The number of degrees is then read from the scale and by a simple calculation is converted into dynes per centimeter.

A summary of the numerous determinations is given in the table:

SURFACE TENSION, PETROLEUM AND PRODUCTS

Product—	Gravity A.P.I.	Surface tension at 35° F. dynes per centimeter
Petroleum	35.4-48.0	23.8-31.2
Gasoline	56.3-62.4	24.4-25.8
Naphtha	46.7-55.2	26.3-29.2
Kerosene	40.2-42.4	30.7-31.2
Gas oil	35.9	33.1
Lubricating oil	19.7-37.1	36.0-37.5
Wax distillate	37.6-33.2	33.6-36.2

The surface tension for petroleum and its products tends to become greater as the density increases. The presence of high boiling fractions in the light products, such as gasoline, increases the surface tension. The surface tension decreases as the temperature is raised; the decrease being approximately 0.05 dynes per centimeter per each Fahrenheit degree increase in temperature.

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PRECISION control is essential to the processing of even the finest crudes. In nine modern refineries, SHELL engineers have perfected the control of each stage of refinery operation to surpass the most stringent technical specifications.

Whether it be oil for heavy duty diesels, special gasoline for the transoceanic and transcontinental flyers, or lubricants for service in extremes of heat or cold, whatever the conditions of atmosphere or altitude, one factor remains constant . . . the quality of Shell Products is consistently maintained.

For, in their production, the latest discoveries of the research chemist are applied under the precision control of able refinery technicians.

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California
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New Mexico
Oklahoma
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SHELL REFINERIES

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Coalinga, Calif.
Dominguez, Calif.
East Chicago, Ind.
Houston, Texas
Martinez, Calif.
Norco, Louisiana
Wilmington, Calif.
Wood River, Ill.

PERSONAL PARAGRAPHS

Jerome Smith of the Continental Oil Company, Ponca City, and Mrs. Smith, are visiting in Colorado.

• • •

George H. Lang, vice president of the Carter Oil Company, is spending his vacation in Minnesota.

• • •

J. C. Maxwell, independent oil operator of Fort Worth, Tex., is enjoying a vacation in the Carolinas.

• • •

George F. Kelly, president, Kelly Map Company, Tulsa, was in Philadelphia, Pa., on a business trip last week.

• • •

Harry C. Hanszen, independent operator, Houston, Tex., is returning with his family from a visit in Europe.

• • •

W. L. Simmons of the Shell Petroleum Corporation has been transferred to Drumright, Okla., from Pampa, Tex.

• • •

Zeke Strong, drilling contractor of Graham, Tex., has joined the list of oil men who are aviation enthusiasts, has purchased a plane, and is learning to fly.

• • •

J. Edgar Marston, president of the Texas Pacific Coal & Oil Company, Fort Worth, Tex., is convalescing in Colorado Springs, Colo., from a slight illness.

• • •

S. F. Bowlby, petroleum engineer for the Shell Petroleum Corporation in Oklahoma, has been transferred to San Angelo, Tex., where he is doing geological work.

• • •

Donald C. Barton, Houston, Tex., consulting geophysicist, has been on a short vacation in Massachusetts, where he went to join Mrs. Barton and to motor home.

• • •

W. W. Fondren, vice president of the Humble Oil & Refining Company, Houston, Tex., has been in Minneapolis, Minn., several weeks where he has been taking treatment and rest.

• • •

Sam Grasinger, sales supervisor for the Dallas Gas Company, Dallas, Tex., has been elected vice president of the recently organized Dallas Association of Automatic Refrigeration Distributors.

• • •

W. C. Trout, of Lufkin, Tex., is on an extended business trip to the North and East in the interest of the Lufkin Foundry & Machine Company, of which he is president. Mr. Trout expects to return to Lufkin about the middle of September.

• • •

H. K. Browning, director of oil country sales with headquarters in Pittsburgh, Pa.; H. B. Weathersby, division manager with offices in Houston, Tex.; and J. B. Durkee, district representative, of Dallas, Tex., all of the A. M. Byers Company, Pittsburgh, have been making a trip through the Mid-Continent area in connection with business of their company.

• • •

W. R. Stephens, formerly chief clerk of the Community Natural Gas Company's commercial department, Dallas, Tex., has been appointed general auditor for the Lone Star Gas Company, and W. R. Payne has been made chief clerk of the Lone Star Gas Company's accounting department. Guy Tribble succeeded Mr. Stephens as chief clerk in the commercial department.

• • •

Maj. J. R. Parten, president of the Woodley Petroleum Corporation of Shreveport, La., has resigned from the American Petroleum Institute committee investigating pipe line runs in East Texas. Major Parten, who is also president of the Independent Petroleum Association of Texas, wrote Pres. A. L. Beaty that he would be unable to take the time from personal business and other responsibilities to render the service.

J. E. Messler of Republic Oil Company, Pittsburgh, Pa., has been a visitor in Tulsa.

• • •

H. P. Taubman, Taubman Supply Corporation, is on a business trip to Texas points.

• • •

J. M. Crawford, president of the Parkersburg Rig & Reel Company, Parkersburg, W. Va., is vacationing with his family in Europe.

Men of the Industry

CHARLES L. GLADDEN

Charles L. Gladden, Dallas, Tex., vice president of the Magnolia Petroleum Company and assistant manager of production, was born in Fayette, Ala., 40 years ago and at the age of 13 accompanied the rest of the family to their new home on a stock and grain farm south of Abilene, Tex. There seemed every likelihood that he would spend his life as a farmer, but in 1917 he was working for C. B. Farquarson, rigging up the No. 1 Fowler, the well which started the Burkburnett Townsite drilling excitement. Following a year in Burkburnett Mr. Gladden went to work for the Magnolia in the Ranger Field. Texas, as a repair man at $4 a day, and he has been in that company's service ever since. In the fall of 1918 he was made head roustabout and the next spring he was advanced to farm foreman, directing work on Magnolia's T. J. Nash farm west of Ranger for two years.

Then came two years in charge of clean-out tools under Superintendent H. A. Axtell. When in 1922 Mr. Axtell was transferred to Cement, Okla., Mr. Gladden succeeded him as superintendent, with offices in Olden, Tex.

Two years later Mr. Gladden was transferred to Sayre, Okla., and again after 10 months moved to a more active district in Wewoka, Okla., which included the Cromwell and Sasakwa areas. In January, 1931, Mr. Gladden was moved to Dallas and made assistant to Marcus McLaughlin, assistant manager of production. At the annual meeting of the company in December, 1931, Mr. Gladden was advanced to vice president, as were Mr. McLaughlin and C. M. Bennett. He was made assistant manager of production to succeed Mr. McLaughlin, who was promoted to manager.

Mr. Gladden plays golf on the Lakewood course, Dallas. He is a Mason and an Odd Fellow.

C. D. Watson, chief engineer of the Carter Oil Company, is in Minnesota on a vacation.

• • •

Sir John Cadman, G.C.M.G., chairman of the Anglo-Persian Oil Company, Ltd., is on vacation.

• • •

F. E. Benson has been made manager of the Greenville, Tex., division, Community Natural Gas Company.

• • •

A. D. Sloan of the Sinclair Prairie Pipe Line Company has been transferred to Fort Worth, Tex., from Houston, Tex.

• • •

W. W. Vosper, of the Toledo Pipe Threading Machine Company, who has been touring England, has returned to New York.

• • •

Warren D. Skelton of Thermopolis, Wyo., geologist, who was severly injured in an explosion on July 4, is almost fully recovered.

• • •

Jake Iuker of Casper, Wyo., has returned after a trip to western Kansas. Mr. Iuker is Rocky Mountain manager for Olson Drilling Co.

• • •

J. J. Zorichak of Denver, Colo., petroleum engineer for the Midwest Refining Company, spent a few days in the company's Casper, Wyo., offices.

• • •

John C. Nicklos, district superintendent of production for the Continental Oil Company at Fort Worth, Tex., visited his company's Rattlesnake Field camp out of Farmington, N. M., recently.

• • •

L. V. Hipp, former service foreman and collector for the Community Natural Gas Company at Vernon, Tex., has been transferred to Chillicothe, Tex., as local manager, succeeding J. D. Moore, Jr.

• • •

George Calvert, Fort Worth, Tex., independent oil operator, has been nominated as a candidate for Congress from the twelfth congressional district. Mr. Calvert is a member of the firm of Broderick & Calvert.

• • •

A. R. Meckler, engineer for Universal Oil Products Company of Chicago, has arrived at Coutts, Alberta, to assist in the operation of the new Dubbs unit recently installed at the Northwestern Stellarene Company refinery.

• • •

Ira G. Weatherill, accompanied by Mrs. Weatherill and daughter, Helen, of Denver, Colo., were in Casper, Wyo., en route to Cody and Bridger, Mont. They visited their son, Ted who is working for the Ohio Oil Company at Bridger.

• • •

A. R. Wilson, division manager, Rocky Mountain region, The Texas Company, Denver, was in Casper on his way home after an inspection of company properties in Montana and Wyoming. He was accompanied by a party of company executives from the New York City offices.

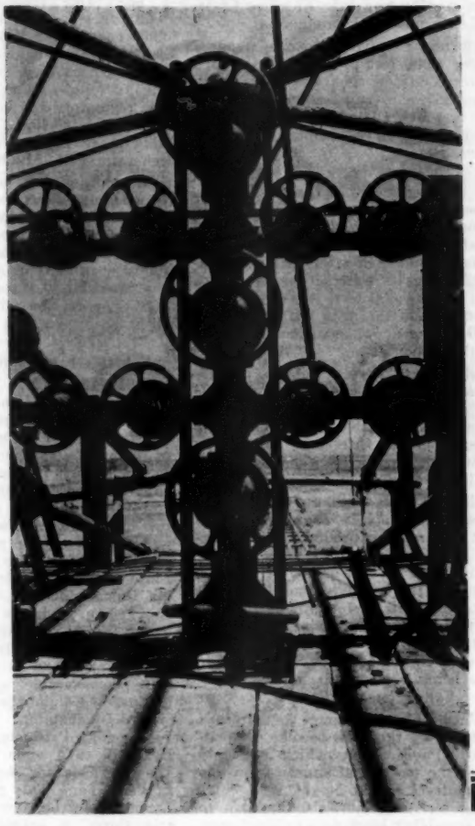
• • •

John D. Clark of Cheyenne, professor of economics at Denver University, was in Casper, Wyo., last week. Mr. Clark was formerly president of the Midwest Refining Company and assistant to the president of Standard Oil Company of Indiana. Mr. and Mrs. Clark returned from Europe last June.

• • •

W. G. Winters, formerly general manager of the Houston Gas & Fuel Company, distributor of gas at Houston, Tex., and more lately public relations director of the United Gas Public Service Corporation, has resigned to engage in other work. Mr. Winters, who has been widely known in public utility circles for many years, became associated with the former company in 1930, leaving that company in June, 1931, to join the United Gas Public Service Corporation, which is a parent company to the Houston Gas & Fuel Company.

3200 Pounds Pressure but Perfect Control



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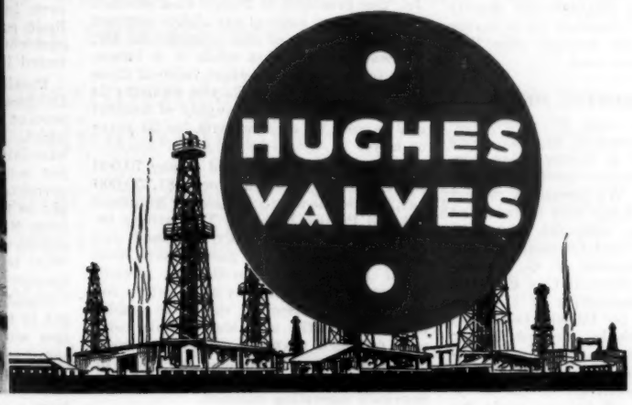

HUGHES VALVES and Fittings can always be depended upon to give the maximum service under extreme pressures and unusual working conditions.

Photo shows Belridge Oil Company's No. 64-27, North Belridge Field, Kern County, California, successfully completed in a new deep prolific zone at a depth of over 8000 feet. Initial production 2000 barrels . . . 75 million cu. ft. gas. Pressure 3200 lbs.—probably highest pressure well ever completed in California or the U. S. A.

Well is equipped with following HUGHES VALVES:

3—6″ 6000 lb. Test	2—2″ 6000 lb. Test
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NATURAL GAS DEVELOPMENTS

Expenditure of $500,000 Is Planned by Gas Companies

CHATHAM, Ontario, Aug. 29.—Following a recent tour of inspection of the Canadian Western Natural Gas, Light, Heat & Power Co. operations in southern Alberta, H. R. Milner, K. C., president of the company, intimated that approximately $500,000 would be spent by the natural gas utility companies with which he is connected.

Improvements and betterments will include work being done by Northwestern Utilities, Ltd., which supplies natural gas to Edmonton. The work by this company covers duplication of a part of the main transmission line, improvement to the local distributing system, provision for odorization of the Edmonton gas supply, and drilling in the Kinsella and Viking Fields to add to the gas reserve for Edmonton. One well in the Viking Field and one in the Kinsella Field has been finished and found largely productive. A second well in the Kinsella Field is drilling.

New work is being done on the Canadian Western system supplying Calgary, Lethbridge and other points in southern Alberta. At Lethbridge some new high pressure main is being laid in the east end of the city at a cost of several thousand dollars. Main line replacement is being carried on at a number of points, and nearly $20,000 will shortly be spent north of Coaldale in re-laying several miles of the original pipe line. British pipe is being used.

SAFETY MEETING HELD

ABILENE, Tex., Aug. 27.—Forty employes of the Community Natural, Lone Star and Stamford & Western Gas companies attended a safety meeting at Abilene recently. A. W. Breeland, safety supervisor for the Lone Star system, and F. L. Richardson, assistant operating manager, discussed safety measures for employes and consumers. R. G. Quisenberry, Community Natural Gas Co., and Leon Taylor, representative of the Pioneer Heating Co. of Dallas, talked on merchandising methods. Conrad Brady and T. B. Blain of the Community Natural office at Abilene were chairman and secretary respectively, of the meeting. C. C. Redding, of Abilene, made the concluding speech.

PLANS GAS VALUATION LAW

SHERMAN, Tex., Aug. 27.—State Senator Jake Loy says he will seek to amend the state laws in such a way that it would be mandatory for the State Railroad Commission to make valuation surveys of gas distributing properties within the limits of towns and cities for rate making purposes. Under existing laws, the commission makes valuation surveys for pipe line companies, while cities are forced to make their own local surveys, Loy said. He intends to ask Governor Sterling to submit the subject to the special session.

HEADQUARTERS CONSOLIDATED

EASTLAND, Tex., Aug. 27.—Consolidation of headquarters for gas companies in Eastland was affected recently in the moving of the business offices of the Community Natural Gas Co. and the Eastland division of the Lone Star Gas Co. geological department to one office building. Personnel of the division headquarters includes Frank V. Williams, division manager; Mrs. Virginia Keen, cashier; J. J. Coffman, division storekeeper; Louis E. Cage, outside foreman; Floyd McBee, fitter; and P. G. Russell and Richard Phillips, geologists.

Terms of Pacific Gas and Electric Co. Deal With Pacific Public Service

SAN FRANCISCO, Calif., Aug. 27.—The Pacific Gas & Electric-Standard Oil Co. of California arrangement transferring control of Pacific Public Service Co. to P. G. & E. is one of the largest transactions made in California in years. Filing of a supplementary agreement to the Pacific Gas-Standard arrangement to which Pacific Lighting also is a party, apparently brings to a termination a long contest which has been going forward over Northern California's natural gas alignments, takes Standard Oil entirely out of the utility field, and on the other hand lodges with the big oil company the duty and privilege of acting as primary source of natural gas supply for a large part of the State.

At a hearing before the California Railroad Commission on application of Pacific Gas to issue common stock for purpose of acquiring stock of Pacific Public Service Co., probable net worth of the properties of the latter company and its subsidiaries was claimed at $27,452,164 by engineers of the company.

E. F. English, executive vice president of the Service Co. and W. G. Vincent, Jr., vice president of Pacific Gas, stressed importance of natural gas rights contract in consideration of the acquisition. Mr. Vincent declared that while it is impossible to determine the exact value of these contracts to P. G. & E., the company is assured of an adequate supply of natural gas to meet its requirements for 20 years or more.

Pacific Gas is committed to pay 70,000 shares of its common stock, $1,750,000 par, for Service's stocks held by Standard Oil and Pacific Lighting. The latter's interest is not specifically disclosed but has been stated in the past to have been about 10 per cent. Pacific Gas already has made known the terms it offers for Pacific Public Service shares in public hands—45-100ths of a share of its common for each share of the Service company's first preferred, and one-fifteenth of a share of common for each share of Service's nonvoting common.

The offer for stock in public hands was to be made within 60 days from July 19 and to run for 60 days. Stock issued for preferred, if sanction is obtained, is deliverable October 1, that for nonvoting common by July 1, next year. Pacific Gas, therefore, assumes no dividend liability in the exchange this year. This also applies to stock to be given Standard and Pacific Lighting.

The position of distribution of the Service company's shares is:

	Outstanding	Owned by S. O. & P. L.	Owned by public
First preferred..	420,143	None	420,143
Second preferred	300,000	300,000	None
Nonvote common	262,142	43,396	218,746
Voting common..	200,000	200,000	None

Pacific Gas guarantees protection to Standard against loss on the $7,794,000 par of five-year 5 per cent notes of the Service company due March 1, 1936, which Standard must guarantee to holders under supplementary agreement to the original indenture. There are $106,000 of these notes owned by the Service company and alive in the treasury representing the balance of the original $8,000,000 issue.

Pacific Gas binds itself to buy all its gas from Standard Oil and Standard Oil agrees to reserve for Pacific Gas the major part of its supply now developed or later discovered north of the Tehachepi. Pacific Gas is given first call on all northern natural gas of Standard above the oil company's own needs. Roughly Standard has contracted to provide for Pacific Gas 50 per cent or more of its vast Kettleman Hills production.

In the main, a basic price of about 7 cents per 1,000 feet is indicated although not directly stated. The new contract in its blanket form, supersedes all present contracts which are adjusted to conform, but price terms of these contracts remain in effect.

As to Kern County gas, Standard agrees to reserve out of the first 3,000,000 feet of surplus gas available daily sufficient for the needs of West Side Natural Gas Co. (Pacific Public Service subsidiary) and then after supplying Pacific Lighting its contract needs out of the next 28,000,000 feet, it will set aside for Pacific Gas the next 25,000,000 feet and 50 per cent of additional surplus above that amount.

Standard has agreed not to execute other sales arrangements without first offering gas covered to Pacific Gas and even in event of sales arrangements, to limit contracts to three-year periods. In numerous other ways Pacific Gas is protected in meeting expanding demand.

Possibility that northern counties of California also may be the scene of important natural gas production is recognized. In the event this develops and Standard Oil is not owner of at least 50 per cent of the acreage, Pacific Gas is permitted to contract for outside gas supply in these areas. Otherwise, it will buy from Standard. This may be taken as a measure of Standard's active interest in what is being done in the northern Sacramento Valley explorations.

Standard Oil also agrees not to sell gas in territory that will become competitive with Pacific Gas, which not only shuts off the most vital supply from any private interests that might seek entry into this territory, but also appears to form a stumbling block to municipal ownership gas projects if any should be developed in Pacific Gas territory.

The main price indication in the contract is an undertaking that in the event Pacific Public Service finds it expedient to sell gas at less than 14 cents per 1,000 feet, Standard will reduce its field price to 50 per cent of whatever price the distributing company sets.

An option is understood to be extant by which Pacific Gas may acquire from Standard Oil its one-seventh interest in Standard-Pacific Gas Line, Inc., which owns the 200-mile 26 to 16-inch gas line from Kettleman to Richmond, Calif. This is not part of the general filing.

TIOGA GAS TO ITHACA

ITHACA, N. Y., Aug. 27.—Ithaca within a short time will be using natural gas from the Tioga, Pa., fields. A feeder line from the main Lycoming pipe line between the Tioga, Pa., Field and Syracuse will be constructed, with the work starting on Monday, August 29. The city has granted permission for the project.

The valve station will be built near the junction of Spencer Road and Albany Street in Ithaca, and will run between sidewalks and curbing to the Old Gas House. This will be used as a distribution point and pressure reduction facilities will be installed there.

Large Drop in Value of Manufactured Products

WASHINGTON, D. C., Aug. 27.—Gas, water and other liquid meters, gas generators and parts and accessories were produced in the United States in 1931 to the value of $21,164,407 (f.o.b. factory prices) by establishments primarily engaged in the manufacture of this class of products, according to the Bureau of the Census.

The value represents a decrease of 44.3 per cent as compared with $38,000,936 reported for 1929, the last preceding census year. The more important items which contributed to the total for 1931 are as follows: Gas meters, $4,958,322; gas regulators and governors, $2,234,461; water meters, $5,897,792; meters for liquids other than water, $2,929,457; gas generators, $1,781,294.

In addition, gas meters, etc., are made to some extent as secondary products by establishments engaged primarily in other lines of manufacture. The total value of these commodities thus made outside the industry in 1931 amounted to $2,069,391, equivalent to 9.8 per cent of the value of the production within the industry.—C. E. K.

MARKET FOR RATHBONE GAS

CORNING, N. Y., Aug. 27.—Announcement was made today by Frank Brewster of Bradford, Pa., head of Belmont Quadrangle Drilling Corp., owner of the greatest number of producing wells in the Wayne Dundee gas field, that arrangements were being made to take gas from the Rathbone gas field, located a few miles from Addison, N. Y.

Although no contracts have yet been signed, plans are to buy gas from Tri-State Gas & Electric for sale to Columbia Gas & Electric, owners of a line in this region. Belmont will probably build a line into the Rathbone Field.

Tri-State owns several small producers in this area and is said to have under lease considerable acreage about these producers. Columbia's line runs eastward toward Binghamton.

Lycoming Producing Co., of Wellsboro, Pa., will take some Tri-State gas from Wayne fields for domestic consumption in Penn Yan. This gas is being sold by Lycoming to the New York Central Electric Corp., a subsidiary of the Associated Gas. Lycoming also plans to sell gas from its wells to Empire Gas, also of the Associated System, for commercial consumption in Geneva.

Lycoming owns two producers in the Wayne Field and has purchased contracts with most of the operators in that area.

It is understood on good authority that only a small amount of gas will be taken from the Wayne Field.

LONE STAR APPRAISAL

An appraisal report of the Oklahoma properties of the Lone Star Gas Co. will be ready for filing with the Oklahoma Corporation Commission and the Texas Railroad Commission by September 1, according to Marvin C. Nichols, a member of the engineering firm of Hawley, Freese & Nichols, engaged to appraise the gas company property. This report will be the basis for determining a fair gate rate, which in turn will be the basis for setting a consumers' rate.

GAS INSPECTOR INJURED

CHATHAM, Ontario, Aug. 29.—H. W. D. Cox, gas inspector for the C.P.R., and C. McCarthy, railroad constable, were injured in an explosion at Medicine Hat, Alberta, while inspecting gas fixtures in a house. The building was practically demolished.

"The World's Fastest Well Diggers"

That is the title that has been conferred on the drilling crew of Humble Rig No. 89. And the facts seem to justify the title. 24 completed wells with an average depth of 3750 feet in 366 days, average time for each well 15.2 days, is a record for others to shoot at. Also, these 24 producers were completed at a cost considerably below the average well cost in the East Texas field.

A number of factors contributed to the remarkable record of Rig No. 89. An efficient, well trained crew, of course; and the most modern equipment. Add to that *Perfect Lubrication!* The driller said lubrication played a major part in establishing this record.

Petroleum engineers, superintendents and drillers are paying more and more attention to drilling rig lubrication.

We have made an exhaustive study of the problem. You can get all the data, including the Humble rig lubrication chart, for the asking.

For High Speed, Low Cost Drilling, Use Humble Products.

HUMBLE

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Humble Oil & Refining Company

HOUSTON, TEXAS

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Sucker-rod Failure and What Can Be Done About It

I read a statement a few weeks ago to the effect that one-fourth of the losses in oil well production result from defective sucker rods. Although I have had my share of rod troubles, I did not suppose they caused so serious a loss of production as that. I would like more detailed information on this subject if it is obtainable. I mean I would like to know more particularly what kind of rod failures have contributed to this loss, which ones are the most common and what measures might be taken to correct or help to correct them.—W.A. T.

Joint failures at the fillet connecting the rod and pin, or box, are responsible for 72 per cent of sucker-rod troubles, according to Emory Kemler, of the Gulf Research Laboratory, from whom was obtained facts in reply to your question. Mr. Kemler's suggestions looking to diminution of rod failures are addressed of course to the manufacturer rather than to the operator.

An analysis of field data on operating wells has shown that the sucker rod failures are distributed according to the following percentages:

Unscrewed joints	10.8%
Pin breaks	25.3%
Box breaks	12.2%
Body breaks	26.3%
Heat treatment failures	23.4%

The unscrewed joint failures result from vibration of the rod, causing the joint to loosen and then gradually to come unscrewed. This type of failure can be solved by either increasing the make-up torque which results in a higher initial lead applied to the joint or by using some patented thread form or locking device to prevent the joint from loosening.

The pin breaks take place at the root of the last vanishing thread. The failure is due to fatigue and starts in the form of a crack at the root of the thread which spreads until it results in complete fracture. This fatigue failure is the result of high stress concentration at the root of the last vanishing thread. This thread transmits a large part of the load and the stress is therefore high.

The size of the sucker-rod joint is limited by the size of tubing used and any increase in the size of the joint is therefor impossible. The obvious remedy then for reducing pin breaks is to reduce the stress concentration. One possibility is to change the design of the pin threads in such a way as to reduce the stress concentration at their roots. Another possibility would be to modify the box in such a way as to improve the load distribution along the pin. Also a reduction of the load carried by the joint could be accomplished by using no initial tightening, which would result in a straightening of the pin. Such a method would require some special locking device to prevent the joint from coming unscrewed.

The box failures usually take place after the box has become worn by rubbing against the tubing. The reduction of area due to wear results in increased unit stress which, with a high stress concentration factor, causes failure. These box breaks, since they are caused by excessive wear, can be reduced only by some type of protector or guide. Some changes in proportions might result in a small decrease in failures.

The body breaks take place in the uniform section of the rod. They are usually caused by fatigue and are accelerated by the presence of corrosion pits. The high stress concentration at the bottom of these pits results in a fatigue crack starting below the ordinary fatigue load. The body breaks are beyond control as far as design affecting them is concerned. These failures can only be reduced by decreasing the load or increasing the corrosion endurance resistance of the steel used in fabrication. In some cases they can be reduced by the use of some type of protective coating which will reduce corrosion.

The heat treatment breaks are so designated because they were first supposed to be a result of the method of manufacture. The pins and boxes are formed by upsetting the ends of the rods. After being upset the ends are normalized in order to remove all upsetting strains and cause a complete recrystallization of the metal into a fine-grained condition. If the ends are not properly normalized the material will be weakened and there will be present some initial strains due to upsetting. There is also some stress concentration present at the fillets because of the change of section.

The problem of reducing heat treatment breaks is one of metallurgy as well as mechanics. The method of manufacture and heat treating are properly metallurgical problems. The part belonging to the field of mechanics is the determination of the stress distribution and concentration in the fillet connecting the box or pin and rod.

Motor Overheated Though Test Discloses no Overload

Perhaps you can make some suggestion that will explain the action of a motor in use in our shop. It becomes overheated although ammeter tests show it is not overloaded. Outside of the motor, which is 15 horsepower and 1,200 r.p.m., the temperature increases 50 to 58 degrees. I have not been able to figure out the cause of this condition.—N. E. E.

It is suggested that you check the voltage of the motor to begin with, and if this is not materially wrong send to the manufacturer of the motor and obtain a connection diagram. With this you can check the connections. This may reveal the source of the excessive heating. If it does not, then it may be that the motor was constructed for some particular purpose necessitating a special stator. The manufacturer will be able to inform you on this point if you ask for the history of the motor, giving the serial number. These suggestions are offered on the theory that while your motor may not be overloaded in the matter of current, the iron loss obviously is high. This may be the result of excessively high line voltage or a faulty connection in the motor, causing excessive voltage per coil and high iron loss, or the motor may have been made for a service demanding a high density stator.

Why Was It Called That?

PLUMER'S RIDE

"Plumer's Ride," as it was called in the chronicles of Millerstown, Pa., has been compared to General Phil Sheridan's historic dash to Winchester. The newly opened Millerstown oil field was a center of excitement in 1873. Clamoring prospectors sought to acquire the Diviner farm of 200 acres, but the old, childless couple owning it declined to lease or sell, not wishing to move. One morning a big operator told his foreman to offer $300 an acre for the farm. Fred Plumer, of Lee & Plumer, overheard him. He saddled a fast horse, galloped 2 miles to the Diviner home and announced to the astonished husband and wife: "I'll give you $200 an acre for a lease on your land, besides one-eighth of the oil, and let you stay in the house." The owners considered the tempting offer a few minutes and then accepted it, signing an agreement. As the triumphant oil man was leaving the farm the foreman whom he had outwitted rode into the yard—too late. The first well drilled by Lee & Plumer flowed 1,500 bbls. a day and they sold out for $90,000 after its production had repaid them for the $40,000 bonus and the drilling expenses. A board artistically inscribed "Plumer's Ride to Diviner" was fastened to the walking beam.

Engineering Problems Met in Drilling Well in a Pond

We are considering plans for drilling a well in a large pond. The location is the one we would select if it were not for the water, and knowing that putting down wells in such spots is not uncommon anyway we probably shall go ahead and do it. The pond is about three-quarters of a mile long and about half that wide. It is about 25 feet deep in the middle and about 11 feet deep at the point where we contemplate drilling. The proposed location is some 200 feet from the edge of the pond. I would appreciate some information concerning the engineering problems involved, especially how solid foundations for the derrick and the bridge, or driveway, from shore should be made, what kind of timbers are used, etc.—G. R. S.

The conditions you describe are not dissimilar to those encountered by the Tidal Oil Co. in drilling a well in small body of water known as Lake Deverna in the East Texas Field in 1931.

A runway from the shore to the drilling site was built first, this work requiring about two weeks. Then a pile foundation was prepared for the derrick. Creosoted yellow pine piles were used for both the runway and the derrick foundation. In addition to the piles driven for a superstructure needed for handling the pile driver itself and other equipment during the building operations, 156 were driven for the permanent structure. Many of these piles were a foot in diameter and 40 feet long. The runway extends past the derrick location to provide a means of getting to the casing rack.

The general construction consists of piles driven into firm ground at the bottom of the lake. Some of the piles forming the foundation for the derrick penetrated 12 feet into the hardpan to provide a solid support. The water in the middle of the lake is about 20 feet deep under normal conditions and the derrick floor is about 8 feet above mean water level.

The piles for the runway were capped by heavy timbers and stringers and a heavy plank roadway was laid on this structure, over which all equipment and supplies were hauled to the derrick site.

To form corners for a 94-foot steel drilling derrick, nine piles were driven for each corner. These were tied together with heavy timbers at the top and the derrick is bolted to this structure.

The boilers, feed pumps and slush pumps are placed on the bank of the lake above high water level. Steam and mud for rotary drilling were conducted to the engines and pumps by pipe lines laid along the runway. The slush pits also are on the bank.

One interesting feature of this installation is the cellar, which was specified as "water-tight," 8½ feet inside diameter. The reinforced concrete walls are 18 inches thick and in forming them double caissons were sunk to lake bottom. The water, mud and silt inside the caissons were pumped out. The forms were lowered to hardpan and the concrete was poured. When the job was finished a dry cellar had been made and the well was started and drilled in the regular manner followed in rotary operation.

In making specifications for the wooden runway and foundations, the timbers selected were of the class used in railroad construction. They have an estimated life of 50 years.

OIL FIELD and REFINERY PLATEWORK

—from Pressure Drums to Elevated Water Tanks

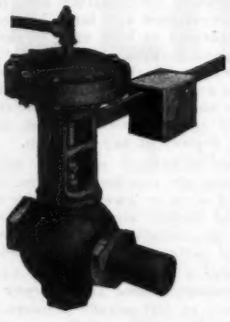
Oil storage tanks—either field-erected or welded or riveted-up cylindrical tanks; spherical and spheroidal containers for pressure storage of either liquid or gas; tank roofs to stop evaporation and fire loss; standpipes; agitators; absorbers; bubble towers; crude stills; smokestacks . . . these are some of the products regularly fabricated in our four modern shops and erected by our experienced field crews for oil producers, pipe lines, refineries and marketers. Whenever you are considering steel platework of any kind, ask our nearest office for information and quotations.

CHICAGO BRIDGE & IRON WORKS

DALLAS	1241 Burt Bldg.	NEW YORK	3147 Hudson Terminal Bldg.
HOUSTON	2919 Main Street	PHILADELPHIA	2615 Walnut St. Bldg.
TULSA	1406 Philcade Bldg.	BOSTON	1517 Consolidated Gas Bldg.
BIRMINGHAM	1536 Fiftieth St., N.	SAN FRANCISCO	1054 Rialto Bldg.
CHICAGO	2128 Old Colony Bldg.	SEATTLE	4323 Smith Tower
DETROIT	1514 Lafayette Bldg.	LOS ANGELES	1323 Pacific Mutual Bldg.
CLEVELAND	2204 Midland Bldg.	HAVANA, CUBA	Apartado 2507

Fabricating plants in Birmingham, Chicago and Greenville, Pa.

It Keeps the DISCHARGE FROM COMPRESSOR CONSTANT



CF

THROTTLING REGULATOR

One of 40 regulators produced with skill and care by the pioneer gas regulator manufacturers of America. C-F products, in range and applications, encompass all practical requirements.

WHEN discharge pressure rises, suction is throttled. Thus discharge pressure cannot exceed a fixed point.

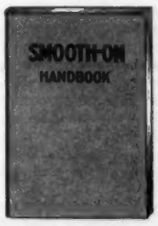
Built especially for this service, the C-F Throttling Regulator is entirely dependable in uniformity of action. With performance always punctual as well as precise, it assures ideal compressor operating conditions in so far as constant discharge is concerned.

The Chaplin-Fulton Mfg. Co.
28-40 PENN AVE. PITTSBURGH, PA.

TAKE THE GRIEF OUT OF EMERGENCY REPAIRS

SCREW-THREAD leaks, blown out gaskets, cracked pressure cylinders, stripped bolts, studs and nuts, etc., seldom invite serious delays, hard overtime labor and high expense for new parts if you have the Smooth-On Handbook of repair-instructions on your desk and a small supply of Smooth-On No. 1 in the store room.

Hundreds of emergency repairs similar to these, and many other routine maintenance jobs can be handled quickly, easily and cheaply with Smooth-On No. 1, which seals joints, cracks and breaks and holds equally well in any metal.



Smooth-On No. 1 expands in hardening and when metallized becomes as dependable as the metal which surrounds it. Full instructions in the Smooth-On Handbook.

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Get Smooth-On No. 1 in 1 or 5-lb. can from any supply house.

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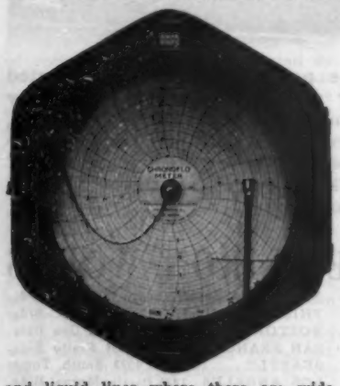
Do it with SMOOTH-ON

NEW AND IMPROVED EQUIPMENT

Wide Range and Accuracy Found in Chronoflo Meter

Wide measuring range, accuracy, and abundance of power are announced features of the new Chronoflo meter which the Builders Iron Foundry, Providence, R. I., described in a 12-page illustrated bulletin. A chart record reliable to one-twelfth the maximum rate and a total flow register accurate to one-twentieth of the maximum flow are promised to all who use flow meters on steam, air, gas



and liquid lines where there are wide seasonal, day and night, or hourly variations in the rate of flow.

The Chronoflo instrument, which may be used with either a venturi tube or an orifice plate, utilizes four products of modern electrical research, the telechron motor, mercury switch, power relay, and electro-magnetic clutch, as the foundation for its operation. Essentially the instrument consists of a telechron driven contact device controlled by the height of the mercury column in the mercury unit (i.e., the rate of flow through the orifice or venturi tube), and a telechron driven register-recorder which is in operation during the exact time that the mercury switch is "on" in the mercury unit. The mercury switch is sensitive to minute changes in mercury level; the power relay instantaneously transmits the contact engaging the telechron drive with the integrating and recording movement through the electro-magnetic clutch.

The manufacturers say there are practically no limits to the distance allowable between the pipe line and the register-recorder—for exceptionally long distances the standard public telephone system circuit can be used.

Smith Announces Cutting Assembly of New Design

The Smith Welding Equipment Corp., 2619-33 Fourth Street, S.E., Minneapolis, Minn., has placed on the market a new cutting assembly, or attachment, for a welding torch called the "Money Saver." In designing this cutting assembly the company's engineering department eliminated such features as levers for the cutting oxygen, adjustable unions to change the position of the assembly in the handle, etc., and substituted valves of simplicity.

The cutting oxygen valve is a triple-thread screw valve with knurled thumb wheel, so arranged that it can be quickly opened and closed with the thumb. The valve forging has been reduced to a simple design. The cutting tip automatically evens up the flames. Double seats and other parts not essential to operation have been eliminated. The new assembly has been approved by the Underwriters' Laboratories.

Among the Equipment Houses

Foote Brothers Gear & Machine Co. has appointed Urauhart Service, 2133 Blake Street, Denver, Colo., as representative of the IXL line of speed reducers and gears in Colorado and Wyoming. Briggs Schaffner, Winston-Salem, N. C., is made district representative for North Carolina.

—

The Regan Forge & Engineering Co., San Pedro, Calif., has appointed George R. Woods manager of its export division with headquarters at 17 Battery Place, in New York. He succeeds William Braat, who has taken a post in Holland. The personnel at the Regan factory in San Pedro continues as in the past. The Bettis Sales Co., Houston, Tex., is Mid-Continent representative.

—

The Austin-Western Road Machinery Co., domestic sales organization of the Austin Manufacturing Co. and the Western Wheeled Scraper Co., is to handle the industrial sales and service of Cletrac crawler tractors in 24 states, broadly the territory covered by the midwestern, southern and southeastern states.

The Railway Locomotor Co., a division of the Ryan Car Co., Chicago, has appointed the M. K. Epstein Co., 121 Lyman Street, Springfield, Mass., as its eastern representative handling the sale and service of the Vapofier in the New England states, New York, New Jersey, Maryland and Pennsylvania. The Vapofier is a device for changing a distillate fuel into its gaseous state and mixing this hydrocarbon gas with air in combustible proportions.

—

Ralph L. Dunckel, formerly with the International Motor Co., has been placed in charge of production and purchasing at the Bridgeport, Conn., plant of the Kron Co. J. D. Young, formerly of the Chicago sales office of the Wright Manufacturing Co., has joined the Chicago office of the Kron Co.

—

The Young Radiator Co., which makes cooling systems and heating units, has received an order for oil temperature regulators, which necessitates putting its engineering and design departments on an overtime basis.

Cleaning Experiments Are Conducted by Butterworth

The Butterworth System, Inc., New York, is conducting experiments on cleaning and gas-freeing of tank cars and land storage tanks. The Butterworth method, utilizing high water pressure for scaling and cleaning, has thoroughly cleaned asphalt tank cars, in experimental demonstrations, at a total cost of approximately $4 each and in its application to shore cleaning work is expected to promote both safety and economy of operation, as well as quicken gas-freeing and cleaning work.

The Butterworth system of tank cleaning is one whereby closed tanks are washed by heated water directed against the sides of the interior of the tanks in a solid stream at high pressure from revolving nozzles. These nozzles turn slowly in horizontal and perpendicular planes so that their positions change continually with each revolution of the machine, causing the stream eventually to be directed against all interior surfaces of the tank. The nozzles are part of a simple machine that is put into the tank through a small opening located in the deck for that purpose. When the machine is placed, the opening in the deck is closed by a gas-tight cover to prevent the escape of gases on deck.

Water for cleaning is supplied to cleaning machines on tankers through high-pressure hose connected to the deck fireline. For most efficient results, this water is heated to a temperature of approximately 165° F. and maintained at a pressure of approximately 175 pounds. During the cleaning operations the tanks are stripped continuously to keep the bottoms free of water, thus permitting the full force of the water stream to strike the tank bottom and break up the rust scale which is then pumped out with the cleaning water.

When cleaning tanks from black to refined oil, it has been found, it is sometimes necessary to wash the tanks with kerosene or furnace oil, the comparatively small amount of cleaning oil required being circulated through the cleaning machines at high pressure.

New Model Viscosimeter Is Being Placed on the Market

The American Instrument Co., 774 Girard St., N.W., Washington, D. C., announces an improved model of the Aminco Saybolt type viscosimeter. The instrument is similar in general to the previous models now in use in such laboratories as those of the U. S. Bureau of Standards, the Army air service and motor transport corps, the Naval research laboratories, the Bureau of Public Roads, and many of the producers, refiners and distributors of petroleum products, but it presents refinements and improvements in both the bath and the tubes.

Bath temperatures are automatically maintained within plus or minus 0.1° F. and a pilot light provides a visual check of thermostat performance. Improvements in the viscosimeter tube permit the rapid changing of universal and furol orifices without draining the bath or removing the tube. The tube, however, is essentially similar to the master tube built by the American Instrument Co. for the American Petroleum Institute and kept in the vaults of the U. S. Bureau of Standards as the ultimate standard tube for the standardization of all Saybolt viscosimeters. A leaflet describing this improved viscosimeter is obtainable on request.

OILPROOF OKOCORD ANNOUNCED

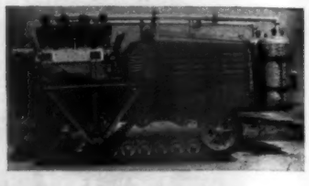
In certain types of service portable cords are subjected to the continual attack of oil resulting in deterioration not only of the outer coverings, but eventually of the insulation. To meet this condition the Okonite Co. of Passaic, N. J., has developed a full line of portable cords and cables having a special outer sheath which is impervious to the destructive action of oil or grease. This line of cords and cables, called "Oilproof Okocords," is designed for use around machine shops, garages, refineries, oil wells, etc. Strong sunlight and ozone also has little effect.

Engineering data concerning Vulco V-flat drives are offered in the current issue of the Industrial News, published by the Gates Rubber Co., Denver, Colo.

Heavy-Duty Compressor Is Mounted on Tractor

The Cleveland Tractor Co., Cleveland, Ohio, working with the Davey Compressor Co., Kent, Ohio, has developed a method of mounting a heavy-duty air compressor on its heaviest tractor, Model 80, without in any way interfering with the drawbar work of the tractor. This has resulted in a machine which combines two pieces of equipment that formerly were sold separately. The tractor is standard, except for the specially designed mounting bracket and platform and the power takeoff.

Two four-cylinder Davey air-cooled



compressors, with a combined displacement of 640 cubic feet per minute, are mounted tandem, and are connected with drive sheaves by independent sets of V-type belts. A 4-inch diameter heat-treated chrome nickel steel shaft 94½ inches long extends through the tractor, fitting into the track frame at either side. This serves to carry directly the dead weight of the compressors and to relieve the tractor transmission case of strain caused by the superimposed load.

The compressors, largely of aluminum, weigh only 725 pounds each. Vibration is said to be eliminated by this type of construction and by the fact that the compressor crankshafts are precisely counterweighted and large bearing areas are provided at both ends of the crankshaft and between cylinders. By putting the weight of the compressor over the tracks and near the seat, the equilibrium of the machine is so well established that it will operate successfully at an angle of 40 degrees in any direction.

Such additional parts as supporting brackets, air receivers, sheaves, etc., are located so as to lower the center of gravity and thereby also help to reduce slippage by increasing traction where the ground surface is hard and smooth.

Under a test speed of 750 r.p.m. the compressors showed an efficiency of 72.5 per cent at 100 pounds pressure, 76 per cent at 90 pounds and 80 per cent at 80 pounds. Translated into air delivery at outlet temperature these eefficiencies are 460 cubic feet, 486 cubic feet and 512 cubic feet, respectively.

Only One Moving Part in New K-Master Steam Trap

The K-Master Midget modernized inverted bucket steam trap announced by Kaye & MacDonald, Inc., West Orange, N. J., has only one moving part. It has frictionless compound rocking fulcrums on a single lever. There are no fixed pivots. It has side inlet and outlet, and no cooling leg is required. No mechanism is attached to the cover.

Alco Products, Inc., a division of the American Locomotive Co., is serving in an advisory engineering capacity in connection with the construction of a complete absorption and stabilization plant for the manufacture of gasoline, recently ordered by the Shell Oil Co. of Canada, Ltd., for its Montreal refinery, from the Montreal Locomotive Works, Ltd.

MAGNOLIA *Announces* Mobilgas with CLIMATIC CONTROL*

YOU may have noticed how your car seems to run differently in the rain than it does on a hot summer day. You have noticed how one gasoline gives you a quick start on a cold morning while another rasps your temper. On long fast drives in hot weather you may have noticed your car sputtering and missing. The reason for this variation in performance is that gasoline is extremely sensitive to changes in "engine heat".

At last something has been done about it. Mobilgas has CLIMATIC CONTROL! By this scientific achievement Mobilgas is preadjusted to every variation in temperature or altitude before it is placed on sale in your locality. Hot—cold—rain—shine—from sea level to mountain peaks, it's all the same to Mobilgas.

The outstanding advantages of Climatic Control are yours in Mobilgas *without extra cost* . . . plus the fact that Mobilgas gives you the highest ANTI-KNOCK performance of any *regular priced gasoline*. Fill your tank today . . . you'll notice a great improvement!

Mobilgas
PRODUCT OF A SOCONY-VACUUM COMPANY

CLIMATIC * CONTROL . . .

. . . is the preadjustment of the specifications of Mobilgas, before it is placed on sale in your locality. It automatically adapts itself to the variations in "engine heat", caused by changes in temperature, altitude, humidity and road "pull". In the Mobilgas Research Laboratories all these changing climatic conditions have been "manufactured" in hot and cold testing-chambers. The road performance of Mobilgas is thus scientifically verified at different "engine heats".

Stay with

MAGNOLIA

and You Stay Ahead!

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS PIPE LINE STATEMENT FOR JUNE, 1932

Runs

	Month (bbls.)	Dly. av. (bbls.)
Gulf P. L. Co.	1,281,094	42,703
Texas P. L. Co.	601,090	20,036
Magnolia Pet. Co.	1,204,764	40,159
Empire P. L. Co.	1,923,624	64,087
Cosden P. L. Co.	558,947	18,632
Stanolind P. L. Co.	2,316,000	77,200
Oklahoma P. L. Co.	2,866,431	95,548
Other lines	4,844,000	161,467
Total June	15,594,950	519,832
Total May	16,605,809	535,671
Difference	1,010,859	15,839

Shipments

	Month (bbls.)	Dly. av. (bbls.)
Gulf P. L. Co.	942,143	31,405
Texas P. L. Co.	1,098,135	36,604
Magnolia Pet. Co.	1,485,375	49,513
Empire P. L. Co.	1,728,561	57,619
Cosden P. L. Co.	569,839	18,996
Stanolind P. L. Co.*	3,573,570	119,119
Oklahoma P. L. Co.	2,754,505	91,817
Other lines	4,500,000	150,000
Total June	15,652,178	555,073
Total May	17,016,936	548,932
Difference	1,364,758	6,141

Stocks

Sinclair Prairie Oil Co.	35,094,000
Gulf P. L. Co. and Gypsy Oil Co.	7,884,095
The Texas Company	2,778,827
Magnolia Petroleum Co.	7,994,960
Empire P. L. Co.	5,510,660
Mid-Continent Petroleum Corp.	2,443,133
Stanolind Crude Oil Pur. Co.	16,033,000
Oklahoma P. L. Co.	2,196,409
Carter Oil Co.	2,197,782
Other lines	15,328,000
Total June	97,460,908
Total May	99,261,701
Difference	1,800,793

*Includes shipments of Texas crude oil.

EASTERN PIPE LINE REPORT FOR MONTH OF JULY

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for June and July:

	June, 1932	July, 1932
Nat. Transit	144,953.51	257,678.41
S. W. Pa. P. L.	74,636.04	46,303.16
Eureka P. L.	284,902.07	254,345.02
Buckeye P. L. (Macksburg)	255,814.51	224,866.44
Buckeye P. L. (Cleveland)	12,368.10	10,799.40
Buckeye P. L. (Lima, etc.)	90,909.75	79,881.40
Indiana P. L.	3,132.06	2,177.70
N. Y. Transit	43,716.35	38,863.85
Tide Water P. L.	24,651.06	22,948.60
Pure Oil	397,731.81	444,629.57
Stoll Oil Ref.	39,472.90	36,275.24
Bradford Transit	419,696.48	393,640.88
Ashland Ref.	139,179.80	133,060.97
Total	1,931,155.54	1,965,470.64
Daily average	64,371.85	63,402.28

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for June and July:

	June, 1932	July, 1932
Nat. Transit	531,479.14	496,936.68
S. W. Pa. P. L.	347,391.97	516,438.97
Eureka P. L.	326,763.56	316,502.51
Buckeye P. L. (Macksburg)	271,862.46	268,503.30
Buckeye P. L. (Cleveland)	1,955.30	1,231.63
Buckeye P. L. (Lima, etc.)	1,425,243.21	1,643,800.68
Indiana P. L.	1,000,264.12	985,847.68
Southern P. L.	65,383.50	65,700.09
N. Y. Transit	194,532.17	208,180.19
Northern P. L.	98,284.38	105,941.67
Tide Water P. L.	501,453.99	438,003.22
Pure Oil	487,086.69	555,295.02
Bradford Transit	436,376.77	423,645.01
Tuscarora Dev.	360,397.93	262,578.32
Total	6,048,975.19	6,288,655.47
Daily average	201,632.51	202,859.86

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of June and July:

	June, 1932	July, 1932
Nat. Transit	704,495.00	660,353.47
S. W. Pa. P. L.	524,602.77	544,191.17
Eureka P. L.	1,172,808.19	1,151,492.16
Buckeye P. L. (Macksburg)	306,904.25	287,514.51
Buckeye P. L. (Cleveland)	36,067.94	32,720.25
Buckeye P. L. (Lima, etc.)	3,311,429.11	2,959,286.50
Indiana P. L.	473,754.90	460,012.73
Southern P. L.	263,226.94	155,254.77
N. Y. Transit	105,004.59	97,545.73
Northern P. L.	211,480.61	271,630.29
Tide Water P. L.	655,876.80	622,396.64
Pure Oil	706,872.31	676,763.35
Tuscarora	8,829.21	8,601.80
Bradford Transit	257,371.07	246,193.50
Total	8,732,724.69	8,176,956.88
Decrease	103,002.20	555,767.81

Grades of Oil

The following table shows the amount of different grades of oil held by the eastern pipe lines at the close of June and July showing gross stocks of the above fields:

	June, 1932	July, 1932
Pennsylvania	3,006,429.19	2,938,186.48
Lima	500,135.35	487,722.43
Kentucky	16,008.41	1,205.71
Mid-Continent	4,467,170.93	4,145,012.16
Illinois	112,915.02	8,491.31
Michigan	636,065.79	596,338.79
Total	8,732,724.69	8,176,956.88

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1929	1930	1931	1932
Jan.	51,749	75,907	53,939	53,501
Feb.	51,833	79,256	55,163	55,498
Mar.	54,252	76,688	54,331	57,199
April	58,444	84,536	54,914	57,348
May	59,902	70,546	53,344	59,105
June	58,833	75,430	54,110	64,371
July	66,087	68,921	50,723	63,402
Aug.	66,087	54,291	51,503	.....
Sept.	67,315	56,595	61,345	.....
Oct.	76,093	58,179	65,595	.....
Nov.	74,831	52,332	59,819	.....
Dec.	74,561	53,999	61,835	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1929	1930	1931	1932
Jan.	165,721	217,623	175,369	186,551
Feb.	159,387	224,355	183,494	169,856
Mar.	161,474	228,846	189,508	188,792
April	169,737	241,845	191,450	202,036
May	184,281	248,383	199,247	201,404
June	185,404	234,401	221,155	201,632
July	194,763	207,094	211,632	202,359
Aug.	194,946	205,506	224,166	.....
Sept.	201,214	193,999	217,537	.....
Oct.	191,367	157,675	210,831	.....
Nov.	202,743	146,638	196,425	.....
Dec.	186,257	143,001	176,241	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1930	1931	1932
Jan.	12,220,045	11,831,092	9,023,914
Feb.	12,991,561	11,506,489	8,974,359
March	13,247,217	11,012,162	8,802,192
April	13,233,961	11,044,481	8,908,661
May	13,052,953	10,728,239	8,835,726
June	13,396,855	9,903,349	8,732,724
July	13,268,562	9,569,849	8,176,956
Aug.	13,047,051	9,192,457	.....
Sept.	12,812,018	8,492,431	.....
Oct.	12,437,553	8,417,694	.....
Nov.	11,851,380	8,830,386	.....
Dec.	11,751,952	9,119,032	.....

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

	Bbls.
Gross stocks, August 1	517,818.27
Runs from wells	443,687.29
Other receipts	78,372.58
Regular deliveries	258,078.52
Other deliveries	252,619.59

The amount of Illinois oil run by the Tide Water Pipe Co. in July was 22,948.60 bbls. Deliveries were 26,458.66 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1932—	Runs	Deliveries
July	466,635.89	284,537.18
1931—		
January	468,429.04	669,573.19
February	429,284.54	461,262.85
March	424,638.22	356,662.26
April	421,814.98	282,532.65
May	433,231.80	322,513.95
June	510,805.78	320,258.13
July	520,009.38	289,219.05
August	476,623.56	393,221.96
September	492,183.83	323,012.50
October	498,124.13	325,834.95
November	470,302.63	281,258.45
December	515,771.28	306,622.19
1932—		
January	500,177.12	246,634.10
February	482,561.50	186,010.30
March	565,538.70	270,617.75
April	461,920.92	285,817.98
May	521,884.64	279,859.88
June	501,878.26	263,703.70

Tide Water Pipe Co., Ltd., also delivered in July, 92,133.05 bbls. Oklahoma oil.

Average Daily Imports of Crude and Refined Oil at Principal United States Ports

Average barrels per day in 1931-32—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
August	32,613	15,581	91,742	22,387	35,741	188,064	4,161	2,516	.....	3,162	9,839	197,903
September	27,067	7,267	106,867	20,099	22,967	184,267	4,833	8,333	.....	.....	13,166	197,433
October	53,710	14,484	100,774	26,742	40,645	236,355	6,097	6,871	2,097	1,838	16,903	253,258
November	48,033	28,800	51,667	28,600	13,967	170,067	2,933	10,833	3,033	1,367	19,166	189,233
December	20,258	16,806	121,807	31,645	34,258	224,774	1,968	4,355	.....	.....	6,323	231,097
1932—												
January	19,161	8,161	104,065	24,194	34,903	190,484	4,871	7,226	2,096	1,484	15,677	206,161
February	32,483	16,517	128,483	28,862	34,552	240,897	2,034	5,207	4,310	1,379	12,930	253,827
March	25,806	10,516	167,806	38,677	45,129	290,935	5,936	39,774	.....	1,516	47,226	338,161
April	37,167	13,467	158,333	38,733	39,400	292,000	6,767	44,600	2,167	3,333	54,867	346,867
May	31,161	2,065	170,226	50,774	14,935	269,161	903	710	4,194	1,516	7,323	276,484
June	30,900	11,700	199,300	22,733	29,900	294,533	.....	.....	12,867	.....	12,867	307,400
July	2,613	2,161	62,968	14,935	2,129	84,806	.....	.....	.....	.....	.....	84,806

Average Daily Receipts of California Crude and Refined Oil at Atlantic and Gulf Ports

Average barrels per day in 1931-32—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
August	3,452	.....	16,419	7,419	4,290	31,580	.....	.....	.....	.....	968	32,548
September	4,567	3,667	12,933	4,699	7,367	32,933	.....	.....	.....	.....	4,000	36,933
October	2,355	1,129	19,290	16,709	9,323	48,806	.....	.....	.....	.....	3,323	52,129
November	1,000	.....	22,800	11,567	.....	35,367	.....	.....	.....	.....	3,366	38,733
December	3,161	.....	23,484	5,835	6,032	40,516	.....	.....	.....	.....	7,742	48,258
1932—												
January	3,871	1,710	14,483	3,774	5,710	29,548	.....	.....	.....	.....	.....	29,548
February	3,069	.....	9,103	4,862	.....	17,034	.....	.....	.....	.....	2,483	19,517
March	1,516	.....	6,065	.....	.....	7,581	.....	.....	.....	.....	.....	7,581
April	3,500	.....	19,333	3,867	4,833	31,533	.....	.....	.....	.....	.....	31,533
May	2,161	.....	15,226	18,774	3,871	40,032	.....	.....	.....	.....	.....	40,032
June	2,500	.....	17,333	3,933	833	24,600	.....	.....	.....	.....	.....	24,600
July	2,323	.....	22,226	8,677	8,935	42,161	.....	.....	.....	.....	.....	42,161

Gross Production of Crude Oil in the United States for 12 Months

(In Barrels of 42 Gallons)

1931—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
July:	Month	16,093,322	16,420,080	33,827,213	3,089,832	1,287,585	1,715,730	2,905,909	3,241,000	78,680,671
	Daily average	519,139	529,680	1,091,200	99,672	41,535	55,345	93,739	107,774	2,538,078
August:	Month	15,668,984	9,517,279	32,279,316	3,141,322	1,166,569	1,584,444	2,807,143	3,167,000	69,331,558
	Daily average	505,451	307,009	1,041,284	101,333	37,599	51,111	90,553	102,161	2,236,502
September:	Month	15,180,610	7,946,880	28,931,525	3,147,030	1,138,380	1,641,384	2,761,230	3,632,000	64,429,039
	Daily average	506,020	264,896	964,051	104,901	37,946	54,713	92,041	121,067	2,180,968
October:	Month	15,651,983	13,951,893	30,725,173	3,177,066	1,172,359	1,822,255	2,797,597	3,900,000	72,198,356
	Daily average	504,903	417,803	991,134	102,486	37,819	58,782	90,247	125,807	2,328,979
November:	Month	14,997,700	16,420,730	28,860,561	3,131,670	1,130,700	1,851,577	2,706,390	3,639,000	72,748,328
	Daily average	499,923	547,691	962,018	104,389	37,690	61,719	90,213	121,300	2,424,944
December:	Month	15,560,984	16,598,299	27,767,651	3,195,642	1,082,148	1,971,817	2,816,759	3,645,000	72,641,300
	Daily average	501,967	535,429	903,860	103,182	34,908	63,607	90,863	117,581	2,343,268
1932—										
January:	Month	15,532,141	13,664,149	26,409,838	3,170,587	1,101,616	1,792,398	2,444,164	3,566,000	67,680,893
	Daily average	501,037	440,779	851,930	102,277	35,536	57,819	78,844	115,032	2,183,255
February:	Month	14,616,862	11,806,190	23,858,375	2,838,339	1,008,562	1,617,087	2,420,224	3,294,000	61,460,139
	Daily average	504,030	407,110	822,703	97,891	34,778	55,762	83,456	113,586	2,119,315
March:	Month	15,575,915	12,998,796	26,162,647	3,042,929	1,062,897	1,703,145	2,617,392	3,553,000	66,716,721
	Daily average	502,449	419,316	843,956	98,159	34,287	54,942	84,432	114,613	2,152,152
April:	Month	15,524,444	12,718,020	26,362,851	2,974,080	1,048,620	1,858,957	2,525,040	3,684,000	66,696,012
	Daily average	517,481	423,934	878,762	99,136	34,954	61,965	84,168	122,800	2,223,200
May:	Month	15,575,741	13,169,420	27,328,472	3,038,930	1,064,602	2,012,701	2,600,633	3,809,000	68,599,549
	Daily average	502,443	424,820	881,564	98,030	34,342	64,926	83,893	122,871	2,212,889
June:	Month	14,118,970	12,757,230	26,161,092	2,837,179	1,022,970	1,957,433	2,416,680	3,699,000	64,870,554
	Daily average	455,451	425,241	872,036	94,573	34,099	61,914	80,556	123,300	2,162,352
Total 12 months		184,097,656	156,978,966	338,725,214	36,788,107	13,286,038	21,428,928	31,819,211	42,929,000	826,053,120